DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

VOL. VI. BOSTON, MARCH, 1854. NO. 3.

REYNOLDS & NOURSE, Proprietors. Office....Quincy Hall. SIMON BROWN, Editor. FRED'K HOLBROOK, HENRY F. FRENCH, } Associate Editors.

CALENDAR FOR MARCH.

"March various, fierce and wild, with wind-cracked cheeks."

Of all the months in the year, March is the most unamiable and unmannerly. It not only pinches with cold, but smites with heat; blows your coat into ribbons, pelts with hail or blinds with driving snow, or drenches with the cold and pitiless rain. Then comes the sun, slanting soft and cheerful rays upon the garden, encouraging a daring crocus or primrose to look out from the withered leaves and grass; but ere they can congratulate each other upon their new creation, a cruel snow storm stifles their pleasant words. There is no confidence to be placed in March—you must take it as it comes, put on your philosophic cloak, and declare that you enjoy it, let it be what it will.

But Nature, though indulging in these rough sports, is still true to her great purposes. "The sap is alive in the seemingly sleeping trunks that everywhere surround us, and is beginning to mount slowly to its destination; and the embryo blooms are almost visibly struggling towards light and life, beneath their rough, unpromising outer coats—unpromising to the idle, the unthinking, and the inobservant; but to the eye that can see, bright and beautiful, in virtue of the brightness and the beauty that they cover, but not conceal."

As spring opens to us, so come the pleasant cares of the season, but not yet many in the garden or field. But there are appropriate duties which cannot be neglected without loss and inconvenience.

Carting out Manures. Though we strongly object to placing manures in small parcels in the fields, if this operation is left until April, it must then be done when the other duties of the farm have greatly multiplied, and when, if it is necessary to pass over the grass fields, they will be much injured by the wheels and feet of the team. In overhauling and mixing the heaps, though something of their strength is lost by it, yet they will be benefited by the more intimate mingling of their component parts. It is a good plan, then, while the ground is still frozen, to haul the manure to the fields which are to be sowed or planted; but it should be dropt in one or more large, compact heaps, and immediately covered with loam, or waste hay or straw. The sun and wind, at least, should be kept from it. In this position it will be convenient for spreading immediately before the land is plowed.

Cellars—Out-houses.—This month affords opportunity, too, for a thorough removal of decayed vegetables from the cellar, sorting the potatoes for planting, examining the casks, tubs, or whatever vessels are to be used, and to have a general cleansing not only of the cellar, but of all the out-buildings. The poultry house, in particular, will need the scrutiny of the master's eye, as there will be few eggs where filth and vermin abound.

Clover Seed.—Where lands were laid down to grass last summer or autumn and clover seed omitted, it may now be sowed with good results. If scattered on a light snow you can distinctly see it, and get it evenly spread.

Plaster.—One or two bushels per acre, of plaster, sowed on pasture lands or on clover fields will have a fine effect, and probably much more than pay the cost.

Implements and Tools.—If these were all put in order last fall, very well—but let a timely examination be made.

Stock.—Young cattle require especial care during the first year; a short allowance of food of a nutritious kind, and exposure to the fierce changes

of March will not only make them lean, but have a tendency to generate disease.

SHEEP.—Feed them on sweet clover hay, an occasional mess of roots cut fine, of corn, or beans, and allow them to browse pine and hemlock branches, and they will repay it all with liberal interest, by clipping time. It is important that they can go in and out of the barn as they please.

MILCH COWS.—They will give you no brimming pails in June if neglected now.

BREEDING SOWS.—Give them plenty of room, and feed so as to keep them in thrifty condition, but not to fatten. Before dropping their pigs, throw them a handful of scraps, a shin of beef, occasionally, and add a little more salt than usual to their swill.

FRUIT AND SHADE TREES.—Whatever is intended to be done in the way of planting fruit and shade trees, shrubbery, hedges, &c., should be arranged for now, as omitting this until the time for transplanting arrives, has prevented thousands from the emjoyments and profits of good fruit and refreshing shade. One cannot afford to stop and plan, and decide, when the buds are bursting and the fields are lifting up their hands for his help! He will not leave his plowing now, but another year—— ah, another year! plants may then be springing from own grave, and the opportunity for doing for his posterity what had been done for himself, is gone! Delays are dangerous.

ABOUT THE CAMEL.

The want of pastures and fresh streams is very unfavorable to cattle, but the camel makes amends to the Tartars of the Ortous for the absence of the rest. It is the real treasure of the desert. It can remain fifteen days or even a month without eating or drinking; and however miserable the country, it always finds something to satisfy it, especially when the soil is impregnated with salt or nitre: plants that other animals will not touch, brambles, or even dry wood, serve it for food. Yet little as it costs to keep, the camel is more useful that can be imagined out of the countries where Providence has placed it. Its ordinary burden is seven or eight hundred weight, and thus laden it can go forty miles a day. In many Tartar countries they are used to draw the coaches of the kings or princes; but this can only be on flat ground, for their fleshy feet would not permit them to ascend hills and draw a carriage after them.

Notwithstanding this softness of its foot, however, the camel can walk over the roughest roads, stones, sharp thorns, roots of trees, etc., without being hurt. But if obliged to walk too far, the real sole of its foot wears out, and the flesh is laid bare. The Tartars, under such circumstances, make it shoes of sheep-skin; but if after this the journey is still much prolonged, the creature lies down and must be abandoned.

There is nothing the camel dreads so much as a wet and marshy soil. When it places its foot on mud and finds it slip, it begins to stagger like a drunken man, and often falls heavily upon its side.

Every year, toward the spring, the camel loses its hair, and it all goes to the last fragment before the new comes on. For about twenty days it is as naked as if it had been clean shaved from head to tail; and then it is extremely sensitive to cold and rain. You may see it shiver all over, like a man exposed to cold without clothes. But by degress the hair grows again; at first it is extremely fine and beautiful, and when it is once more long and thick the camel can brave the severest frost. It delights them to march against the north wind, or standing on the top of a high hill, to be beaten by the tempest and breathe the freezing air. Naturalists have sometimes said that camels cannot live in cold countries; but they could hardly have meant to speak of Tartar camels, which the least heat exhausts, and which certainly could not bear the climate of Arabia.

The fur of an ordinary camel weighs ten pounds; it is sometimes as soft as silk. That which the entire animal has under his neck and along its legs is rough, tufted, and black; but the hair in general is reddish or gray. Tartars do not take care of it, but suffer it, when it falls off, to be lost. In the place where the camels feed you may often see great bunches of it, like old rags, blowing about, and sometimes, in the hollows and corners of the hills, large quantities will be drifted by the wind. But it is never picked up, or only a small portion of it, to make a coarse sort of sacks and carpets.

The milk of the camel is excellent both for butter and cheese: the flesh is tough, ill-flavored, and little esteemed by the Tartars. They make use, however, of the hump, which they cut in slices and take with their tea.

It is said that Heliogabalus had camel's flesh served at his banquets, and that he was especially partial to the food. Of this latter dainty, which the emperor had the glory of discovering, we cannot speak; but we can affirm from our own experience, that the flesh of the camel is detestable.—*Huc's Journey through Tartary.*

KICKING HORSES.

MR. EDITOR:—It occurred to me that a receipt published in your paper for the cure of kicking horses, might be of much service to persons afflicted with such dangerous animals. The operation for cure to be commenced as follows, to wit: Put on a headstall or bridle, with twisted W. or twisted straight bitts in the mouth of the horse to be cured, then put on a common back-saddle, with thill lugs, or any strap or girth, with loops on either side of the horse, is equally good; then buckle a pair of long reins, open in the middle, into the bitts, and pass them through the thill lugs or loops; one to each hind leg, above the fetlock joint, there make each rein fast to the leg, allowing sufficient length of rein for your horse to walk or trot, as the operator may think proper. Every thing complete, you will have the animal commence the operation of kicking; the first will be a smart kick, the second lighter, and so on till your horse cannot be made to kick any more. By the above method many now worthless horses may be made valuable.—*Maine Farmer.*

☞ Trust him little who praises all—and him less who censures all—and him still less who is indifferent about all.

For the New England Farmer.

MONTHLY FARMER FOR FEBRUARY.

Forty-eight pages a month make five hundred and seventy-six a year—a large volume for one dollar. But books, like watches and jackknives, must not be valued by bulk alone. A large knife, a fine-looking watch and a big agricultural paper, may be made so carelessly, and of such improper material, as to be poor property at any price; unless they serve to gratify the first indefinite longings of the boy for a knife, of the youth for a watch, and of the farmer for a paper. As respects agriculture, may we not hope that she is putting off "childish things"—that the demand for cheap publications is giving place to a requirement of ability and talent? But how shall these be secured without remuneration, and how remunerated without the means? A reasonable compensation for the labors of correspondents is as justly part of the expense of publishing a paper, as are the bills of the printer and paper-maker. Agricultural publishers, therefore, who make no provision to reward any other scientific investigation, practical experiments, and instructive essays, than such as may be furnished by a single editor, have obviously not fully "counted the cost;" nor have those subscribers who expect a properly conducted agricultural journal, to be furnished at the price of the cheapest second-hand story paper. The literary man or the politician, would hardly keep posted up without his four or five dollar Quarterly, the writing of every page of which is well paid for, and thus the best talent secured; and we farmers need something of the Quarterly in our agricultural journals—and to secure this we must be willing to pay a little more than the cost of the paper, ink and type on which they are printed. Unless we are disposed to do so, I am afraid that some of those writers to whom we are indebted for so many interesting and instructive articles in the *Farmer*, will feel less obligations to continue their labors. Any one who will look over the contents of the February number, with me, will I think agree that we cannot well part with any of these, our teachers.

BUTTER.

Valuable extracts of a Report of a committee of the Rhode Island Society on "Butter and Cheese." A communication from Berkshire gives the result of experiments with the milk of five cows in June and September, by which twenty-two pounds of milk were required for a pound of butter—a long chalk behind the four-quart heifers of Framingham.

"FARM FENCES."

An article so full of facts and suggestions, that all who have fences to build or repair in the Spring, will be likely to read it over again, before commencing operations.

FARMING.

The first number of a series of articles on "Farming in New England," although occupying only one-half a page, is "a model" in form and finish. In his brief enumeration of the elements of English farming, capital is omitted. I had supposed this to be an item of such importance, that all comparisons of the agriculture of Great Britain with that of other countries, particularly new ones, would illustrate the importance of capital, as well as of science, to her agricultural operations. Especially if an estimate be correct that was made some ten years since by one of her own associations, that over $1,600,000 worth of manures were annually imported into the country, and that three hundred vessels were at that time employed in the guano trade alone. Two other articles may be alluded to here, that will not be likely to escape the eye of any farmer into whose hands this number may fall—one, an essay on the cause of "Exhausted Lands," and the other, "Franklin County Premiums," give particulars of several instances of successful farming.

GARDEN.

"What a garden should be," and what a garden can do, is here very ably discussed.

DOMESTIC.

"The way to make a wife cheerful," will undoubtedly be read by some who have cross ones, and my opinion is, that it will do them good.—Lime water recommended for "The Preservation of Eggs."

FRUIT.

Success of the "Dix Pear on quince." Origin, character and figure of the "Danvers Winter Sweet Apple." Shortening-in "Peach Trees," recommended and illustrated.

MEETINGS.

The Winter is the season for meetings, and meetings the occasions for speeches. But how wonderfully are one's auditors increased when a speech addressed even to a large room-full of listeners, is spread upon the pages of the *Farmer!* Study well your speeches then, for the eyes of tens of thousands are upon you. The February *Farmer* has reports of the two first Legislative Agricultural Meetings; of a meeting of the State Board of Agriculture; of the Concord Farmers' Club: and of the Vermont State Agricultural Society.

SWAMPS.

Very circumstantial, business-like and encouraging details of the expense and income of a reclaimed swamp. There is something expressive in that word *swamp*, it speaks right out; and why so many should try to get round it, by using "wet meadows," "low pieces of ground," &c., I don't know.

SCIENTIFIC.

A discussion of the question "Will dry Gypsum absorb Ammonia?" and an article on "the Atmosphere and its effects on Animal Life." Reasons for the caution, "Don't pull off the Suckers" from corn.

STOCK.

When the thermometer is at zero, and hay at the "bleeding point," farmers naturally think much of the animals dependent on them, and all such experiments as are detailed in "Feeding Stock," are carefully considered. Those of us who are neither able nor willing to give a hundred dollars for a calf of any foreign breed, will experience a feeling of satisfaction, on reading Mr. Proctor's opinion of our native cattle, expressed in his "Address." "Stabling and Feeding Cows in Winter," with the article immediately following it, are answers to questions on the proper management of these noble animals. We then find an article headed "Horses Frozen or Starved;" a pic-

ture of an English prize horse, with remarks on the Suffolk breed; and a recipe for "Straightening steers' horns."

VARIETY.

Two articles advocating the establishment of Model Farms; two on Farming by steam, one by an English paper, the other by Mr. Durand, of Derby, Ct.; an article to prove that shade is as good as manure for poor land, is written by Mr. Cross, of Hoosic, N. Y. There may be great virtue in shade and, for ought I know, in moonshine too; but at any rate the shade theory is "nothing new." "Farmers in Public Places," is an apology for farmers that do not speak in public, and would answer, "without material variation," for those who do not write, but I cannot see what good it will do in either case. I fear it will do harm. Are farmers entitled to the plausible excuses for refraining from participation in publicdiscussions of agricultural topics, which this article is too well calculated to furnish them? Look at the one hundred and nine farmers in our legislature, and then at their reluctance to take part in their weekly discussions even of topics which involve the most ordinary practical knowledge of farming. The glorious faculty of speech is one of the choicest gifts of our Maker. And how far this talent may be "hid in a napkin" without incurring the guilt of the Slothful Servant, each one must decide for himself. A Reader.

Winchester, Feb., 1854.

AGRICULTURE, SOUTH.

Some of the people at the South met at Columbia, South Carolina, on the first day of December, 1853, to discuss the interests of agriculture. It appears to have been an adjourned meeting of the "*Agricultural Association of the Planting or Slaveholding States.*" The names of several distinguished persons are included in those mentioned, and the meeting appears to have been an energetic and harmonious one. Several addresses and speeches were given on popular and interesting subjects; one by Dr. John Bachman, on the "Natural Sciences as connected with Agricultural Improvement;" an Essay on the "Culture of Fruit at the South," by J. Van Buren, of Georgia; an Address by H. W. Ravenel, on "Botany and Agriculture;" another by Isaac Croom, of Alabama, on the subject of "Clover and Grasses at the South;" and another by Dr. A. A. Lipscomb, of Alabama, on the "Progress of Southern Mind;" and others on "Native Trees of the South, and Landscape Gardening," "Black Seed Cotton," "Sea Coast Crops," on the "Treatment of Slaves," the "Cotton Trade," &c.

They passed a set of resolutions the gist of all being in the 5th, as follows:—

Resolved, That it is the opinion of this meeting that the Association should, at its next annual meeting, or so soon thereafter as the amount of subscription shall amount to $500,000, memorialize Congress and the Legislatures of the Southern States, for the purpose of obtaining their aid in the completion of a work [that is, the establishments of a Central Agricultural College] which involves so much of the welfare, not only of the South, but of the entire confederacy."

These remarks of progress among our Southern brethren are encouraging, and if their efforts are steadily pursued will soon have an important influence upon southern society as well as upon the face of the earth about them.

For the New England Farmer.

CARROTS—ROSE BUGS—FERTILIZERS.

Mr. Editor:—Sir,—I usually make a record of anything which I discover in your journal, or elsewhere, likely to prove of practical value to myself or others in Agriculture or Horticulture. I had supposed that I had obtained valuable information from your article, "Roots vs. Hay," in the April number, page 168, both as regards the relative nutritive qualities of different roots, and of herds grass and clover as compared with them, and also as to the advantage of feeding a horse with carrots, in place of corn, as detailed on the first column of page 169. It was a plain, straight forward and easily-understood statement. But all this clearness of idea has been turned into a snarl, (which I must appeal to you to unravel,) partly by your remarks following, and by a subsequent article in the same April number.

On page 168, in 1000 parts mangel wurtzel, 136 parts are stated to be alimentary matter.

On page 168, in 1000 parts carrot, 98 parts are stated to be nutritive matter.

On page 169, on 8—12 line from *bottom*, the mangel wurtzel is stated by you to be "*less* nutritive" than the carrot. Was the "printer's devil" in fault? But the component parts of starch, gluten and sugar, foot up in each respectively 136 and 98.

But further, taking the nutritive proportion of carrots to be 98 in 1000 parts and of herds grass from 89—100, as stated on page 168, I infer that carrots are at least as nutritious as herds grass. I accordingly weighed my carrots this month, when the weight is probably less than when they were first housed, and find they weigh 43½ lbs. per bushel, which at a yield of 350 bushels an acre, would give a little more than 7½ tons per acre to be compared with 3 tons (a heavy yield) of herds grass per acre. If herds grass is no more nutritive, the carrots are well worth the extra labor, especially if you frequently get no more than 2½ tons herds grass per acre, which is just ⅓ the 7½ tons per acre of carrots. But on page 183 of the April number, Mr. Proctor says carrots are generally placed at "*half the price of hay*," "as feed for stock," and that "perhaps their true value will be found between ⅓ and ½ that of good hay, according to the purposes for which they are wanted." Now I had supposed according to the statement of page 168, that they were at least as nutritious. And on page 184, Mr. Brooks, of Princeton, makes 3 lbs. of carrots equal to one pound of good hay. From page 169, and my own weighing of carrots, I should infer that 87 lbs. of carrots would keep a horse as well as 56 lbs. of corn; but Mr. Brooks, page 184, makes 3 lbs. of carrots equal 1 lb. hay, and 1 lb. Indian meal equal 4 lbs. hay; that is, 12 lbs. carrots to be equal to one lb. Indian meal!

Mr. Brooks, however, judges by the effects upon milk; but if the statement on page 168 is correct, and the nutrition of carrots is equal to that of hay, and if 3 lbs. make only as much milk as a lb. of hay, then it follows that ⅔ of the nutrition of carrots goes to make flesh, and that cows will gain twice as much flesh while fed on carrots and give at the same time as much milk as when fed on hay. But is this so? Or which statement is the erroneous one?

Mr. Lincoln's calculation, as quoted by Mr. Brooks, page 184, I take to be an error of the printer, or of haste in the manuscript; for carrots, at 10 cents per bushel and 40 bushels to the ton, cannot be "ten times forty-four dollars the ton for carrots;" or if so, it does not follow that "you have $4,02 as the value of one ton of carrots."

ROSE BUGS.

Three years ago last summer my roses were overloaded with rose bugs. Having seen it recommended to sprinkle the leaves of the bush with ashes when the leaves were moist, and having seen it stated that the bugs emerged from the ground during the early part of June, it occurred to me that a heavy coating of ashes to the ground above the roots, a little while before they emerged, might affect them; or the ley, as the ashes leached, might destroy them. I have so applied ashes for two seasons, knowing that, at least, they would benefit the rose *bushes*. My roses have been visited the last two summers by *very few* rose bugs; one, two or three being sometimes discovered on a rose, and many entirely free from them, which was a great difference from the swarms which infested them three summers since. But as one swallow does not make a summer; as I might have thus escaped, had I not thus used the ashes; as the world is full of "post hoc, propter hoc" reasoning, I wish that others, whose roses are thus infested, would make trial of this thing and report progress.

FERTILIZERS.

Is it not probable that the water in which vegetables have been boiled, contain no small proportion of the alkalies and salts known to exist in the ashes of vegetables when chemically analyzed? And would not this water, applied to growing vegetables, be a valuable fertilizer? I have often purposed to use it, but never have as yet. I notice that more than one man certifies that the water in which potatoes have been boiled, will kill lice on cattle if applied or rubbed into the hair. Is it not the potash of the potato which boils out? If true, it serves to recommend it as a fertilizer. Have any experiments been made with pearlash (carbonate of potash) as a fertilizer? It is certainly cheap; or with aqua ammonia as a fertilizer, compared with guano, &c. &c. As the ammonia water of the shops is of strength enough to make, with ten drops in a tumbler of water, water quite as strong as one could well drink, I should suppose that 12½ cents worth would make a hogshead of water stronger than it would do to apply to vegetation; and perhaps it might, $1 for $1, be worth as much, or more, than water in which guano has been dissolved.

Who has ever made trial with sulphurate of potash as a fertilizer, a small quantity of which, dissolved in water, gives powerfully the fœtid odor of the strongest sulphur waters? Perhaps for the mildew on grapes, the combination of the two, sulphur and potash, would do better, if the soil needs the potash.

I am not without strong suspicion that we have some valuable fertilizers within reach, which may be cheaper than guano, and, if mixed with each other, or with excrements of hens, may be as valuable.

Yours, respectfully,

LEWIS S. HOPKINS.

Northampton, Jan., 1854.

REMARKS.—We hope some of our intelligent correspondents, "who are trying all things," will reply to the inquires in this interesting article. As to our own discrepancies, we do not now recollect to whose analyses we referred in preparing the articles spoken of, and it is possible that those of different persons were consulted. There is scarcely any thing we need so much as a series of well-conducted analyses of the products of our fields; and even then, an approximation only can be made to the true value of the crop, because the same kind of crop, turnips or corn for instance, will vary considerably in their nutritive properties. These properties are varied by several circumstances, viz:—the kind of soil, the manures with which they have been fertilized, size of the plants, whether cut early or late, and also of location. The same kind of crop might vary considerably in these properties, where one portion grew on the north and the other on the south side of a hill.

CULTURE OF CRANBERRY VINES.

The following is Mr. TROWBRIDGE'S manner of cultivating the cranberry vine. See his advertisement in another column.

The Bell variety or Egg shape is mostly cultivated in New England, and usually bears good crops as they grow wild—but when transplanted and cultivated, the berries are large and abundant, and bears large crops often after two or three years, from one hundred and fifty to two hundred and fifty bushels per acre—are hardy, and can be cultivated in any part of the United States.

The soil best adapted, is such as will keep moist through the dry season; they have been raised on land high enough to produce corn and potatoes with a wet substratum under the soil, or a clay and loam. They will not succeed well on dry, sandy, or land liable to bake or become hard in dry weather—but they will produce an abundant crop on poor swampy land that will not produce any other valuable crop, or any wet land after being drained. Dry ground should be plowed and harrowed smooth, in a swamp where a plow will not work; the turf or bog may be peeled off or burnt to get the weeds and grass out. They may be set in fall and spring, as early as the ground will admit until the middle of May. Moss, tan, or anything to retain the moisture would be beneficial around the plant after transplanting; a little sand around the plant fall and spring, will tend to keep the weeds out.

Planted in drills as you plant strawberry, cabbage, and other plants one and a half to two feet apart. At two feet apart each way, it will take

10,000 plants to the acre. Hoe them slightly at first, until the roots become clinched, and afterwards no other cultivation is needed, unless to keep out weeds and grass. The plants may be expected to run together and cover the whole ground in two or three years. They can be gathered with a cranbury rake made for the purpose, to be procured at the agricultural stores.

F. TROWBRIDGE.

New Haven, Conn.

CONCORD FARMERS' CLUB.

THURSDAY EVENING, FEBRUARY 9, 1854.

After the reading of the Journal of the previous meeting, the following question was discussed :—*Would it be for the advantage of the farmer to pay more attention to the cultivation of Indian Corn?*

Mr. DODD said if the present high prices continue, and the prospect is that they will, it undoubtedly will be for the interest of the farmer to give more attention to this crop; his opportunities to learn the comparative value between this and other crops, had been limited, as he only cultivated a garden, but he had received favorable impressions of the corn crop, and thought if he were engaged in farming, he should devote a considerable portion of his land to it, in preference to most others.

Mr. E. W. BULL said, the corn crop is well adapted to our climate and soils—nearly 100 bushels per acre had been raised in this town: it is a fine crop on which to prepare the land for other uses. This was Arthur Young's opinion. Another, and economical view of the case is, that it keeps our money at home—the man who raises his own bread-stuffs has this important item at first cost, and loses nothing in it by transportation and exchanges; he considered the leaves and stem of the plant a sweet and nutritious fodder, but it ought to be preserved with care, that it may retain its best properties; it loses in value by being exposed late in Autumn. He had seen it stated that corn cut at the root just when the kernel is glazed, makes better bread, and that the fodder may then be saved in excellent condition. Mr. Ellsworth had found that at about the time when the kernel is becoming hard and changing its color, it takes up the saccharine qualities of the plant. There is, undoubtedly, a difference in the properties of the various kinds of corn, some containing largely of oil, and other kinds of starch and sugar: therefore, one kind, would be most suitable for fattening purposes, and another for the family. He thought the crop not so exhausting as a crop of potatoes, or some other crops. Cutting the top stalks would injure the grain, as every leaf has its office to perform in perfecting the seed. He thought salt-petre a valuable manure for the crop.

Mr. JOHN RAYNOLDS said the corn crop was one of the most important in New England, and that it ought to be increased. It is, perhaps, the most sure and profitable crop we cultivate. He thought deep plowing and high manuring were necessary, and that with these, and careful cultivation, the amount, per acre, may be materially advanced throughout the State. But he would not cultivate in the old way—would not hill, and would plant thicker; instead of 3½ and 4 feet, would plant 3½ and 2, and by shading light land a little, suppress weeds at the same time that he multiplied the number of ears. It has been stated in the Plymouth county reports that they have succeeded in raising 130 to 140 bushels per acre, under this mode of cultivation. He thought different kinds of corn quite unlike in their nu tritive properties, but did not know which is the best. The stover on an acre he considered equal to the average crop of English hay, say one ton per acre; on this point he had asked the opinion of several intelligent farmers, and they agreed with him; he said, however, that much depends on the kind of corn raised, and the manner in which the fodder is preserved. In feeding out the fodder, the butts may be cut, thrown into a hogshead, and where three or four gallons of hot water are thrown over them, they will become quite soft in the course of a few hours. The cask should be covered as tightly as possible with boards and a blanket. After sprinkling a little salt and meal over the steamed mass, the cattle will readily eat the whole.

Mr. JACOB B. FARMER, said the yellow corn contains more oil than any other kind—he would not run exclusively into the corn crop, but would cultivate others, and give *the whole* more attention. He thought it more exhausting than potatoes—where potatoes grew on the same field with corn, the succeeding crop was the best on the potatoe ground. Corn, cut up at the roots and shocked, will be four pounds lighter in the bushel than that allowed to stand and ripen on its roots. It makes sweet bread, but the chit shrinks: but when cut the fodder is worth more. Topping corn while the leaf is green is injurious to the grain. He had noticed that if the season was unfavorable for corn, there were usually good crops of the lesser grains; —plants 3½ by 3 feet, and with 10 ox loads of manure to the acre, on light sandy soil, gets 40 bushels of corn, as an average crop. In taking up grass land, if it is a clayey soil, he would plow in the fall, but if light land, plow late in the spring in order to get a good supply of grass and quick fermentation. Would spread the manure and plow it under three inches.

ELIJAH WOOD, Jr., considered corn one of the best crops, as it was the surest—it seldom failed by frost, insects, or other causes. For getting land into good condition for succeeding crops, it is excellent. Can raise corn much cheaper by planting large fields, as there is considerable saving in fencing, plowing and hoeing. The stover will nearly pay the cost of cultivation, the corn shades the

ground so much, that after the last hoeing, very few weeds start. Plants 3½ by 3 feet, 3 stalks in a place, does not hill, and gets 40 to 50 bushels an acre. Thinks it a bad practice to pull out suckers. The potato crop is more exhausting to the land than the corn.

On this latter point, a desultory discussion ensued in which several gentlemen engaged, but, with one or two exceptions, all agreed that the potato crop was more exhausting to the land than the corn. Our report is a meagre one, not embracing a quarter part what was said on the subject.

For the New England Farmer.

FARM FOR EXPERIMENTS.

Messrs. Editors:—In an editorial article, and a communication from Essex, in the *Farmer* of 21st inst., the importance of establishing an experimental farm in each county of the Commonwealth is stated and vindicated by arguments which I should suppose would prove convincing to most minds. The agricultural societies have done a good work, they have accomplished what was chiefly in contemplation in their formation; they have called forth very general attention to the necessity and the practicability of improvements in every branch of the farmer's business; but do not at present employ the means of perfecting improvements in many branches. Most of the offers of premiums, look not beyond the labors of a single year, and when it is otherwise, when experiments are proposed which require several years for their completion, the terms of the offers often give the impression that the results of the last year's labor are chiefly regarded in making the award. The statements made by applicants to committees are almost universally complained of as imperfect and unsatisfactory. The manifest object of most of them is to secure a prize rather than to communicate any valuable information to the public. Impartial statements and directing information are to be expected only from those who make experiments with a special view to the increase of knowledge and usefulness, and who are not influenced by the trifling objects of a little immediate money reward or some evanescent reputation. Impartial statements would emanate from a scientific manager of a model farm, and it might be confidently expected that ere long they would produce more enlightened and united views on the leading agricultural interests, the preservation and application of manures, the manner and extent of drainage, the proper time, depth and frequency of plowing, and the economical management both of fields and herds.

I should regard it as indispensable to connect with an experimental farm, a school where youth would be instructed in those branches of science which have direct connection with rural pursuits, and where they would also be exercised in manual labors, without experience in which they could never become qualified even to superintend a farm to much valuable purpose.

There seems to be a very general impression that we ought to have agricultural schools established; I rejoice in the evidence before us that so many intelligent men are now advocating the establishment of one in every county of the State. Concerning the means through which it can be done, we have variant views. Some suppose calls upon our opulent citizens for donations might prove successful. The writer doubts whether many county schools will soon be established by the donations of rich men. The liberality of that class of men is well known, and has been productive of immense good, but I think all experience shows that when large sums are given for public purposes, they are disposed to place them in more dignified institutions than a county school. I think that each county might, and that the time has arrived when they ought to commence the foundations of an agricultural school. Annual exhibitions have attracted great attention, and are not likely to fall into neglect. Many offers of premiums have been framed with a special view to give attraction to the exhibition. Some of these could be safely omitted, and the sums so offered heretofore applied to an accumulating fund for the support of a school. It might prove the work of many years in some of the counties, but the desired result would ultimately be attained. And if the counties should appear earnestly engaged to accomplish so desirable objects, the hope would be reasonable that a wise legislature would do something in aid of their efforts.

M. A.

Pembroke, Feb. 10, 1854.

Remarks.—We recognize in the above "an old hand at the plow," and tender thanks that, as the poets say, he has "tuned his harp" once more to this important theme. With the writer, we look to the *Counties*, to take the initiative in the great work of establishing the proper institutions for the instruction of our youth in agricultural knowledge. Let them invest their funds in a county farm, and there institute such inquiries and make such experiments, as they safely may in a careful and economical manner. Let the county shows be holden on, or in proximity of this farm, where all may on that occasion see the stock, implements, and improvements, whatever they may be. The people of the county interested in the advancement of agriculture, will thus compose a sort of examining committee, whose annual visits will increase and strengthen their interest in the enterprise.

The existence of such a farm, managed judiciously, would soon attract the attention of some of the wealthy and liberal citizens of the county, who would not suffer it to languish and die for the want of those funds which would sustain it, and the bestowal of which would prove a great public benefit, and confer upon them the perpetual gratitude of mankind.

This, to us, seems to be the plain path of progress in the right direction. Which county in the Commonwealth will claim priority in the noble work! Shall we hear from the men of the mountains in Berkshire, from the sandy fields of Plymouth, from the broad and fertile meadows which sweep away on either side of the Connecticut, or from

maritime Essex, or the old Indian Hills of Middlesex? It would be a noble emulation. We wish the contest were begun. Who will start it?

For the New England Farmer.

CUTTING SCIONS.

MR. FARMER:—As the season approaches for this interesting portion of every man's labor who owns or cultivates a farm or garden, some simple directions may not be uninteresting to many of your numerous readers. Many neglect cutting or procuring them, supposing they must be cut at a *certain* time and kept in a *particular* manner or they are worthless. It is quite time all such humbugs should be exploded.

Some ten years since I had the *variety fever* in Fruit culture which has continued with little abatement. I have procured and sent scions from and to almost every State from Maine to Missouri; have cut and distributed more than one hundred thousand. So I ought to give directions with more confidence than a "raw hand." After a tree becomes dormant and the leaf falls in Oct., scions may be cut at any time before the buds again start, which here for seeded fruits is about the last of March or in April. In fact there is no difference in time so far as relates to the value of the scions—the only trouble is to keep them. This may be done for six months or six years, and have them perfect. Scions cut in the fall may be buried in any dry soil in orchard or garden until wanted for use. When one is collecting them during the winter, the best way is to select some place where snow will not be affected by thaw, and bury them in snow as received, taking them out where the snow begins to melt in the spring and transferring them to the ice house or cellar.

When one cuts scions on his own premises for use or distribution, the best time is here generally the last of March or early in April, as they are then as dormant as in the winter, and less time and trouble to keep them.

KEEPING SCIONS.—The only secret is to keep them *cool* and *damp;* not *wet*. The best course I have ever tried is to lay them on a brick floor in a *cool* cellar, and cover with thick *damp* sacking—if the sacking becomes dry, *sprinkle* it. In this manner they are kept in perfect order from March until June, and easily taken as wanted. Many plans are recommended, some troublesome and others unsafe. I once had more than 5000 packed in damp pine saw-dust in a warm cellar, and though *apparently* in perfect order, they became worthless.

TRANSPORTATION OF SCIONS.—When sent in such quantities as to send by express, the winter is the best time—but if sent in the spring, they can easily be sent 1000 miles or more by being packed in damp moss which is well understood by those who sell scions, so that any one wanting can order with the assurance of receiving in perfect condition. Amateurs who wish *sorts*, can, at the present low postage, get them by mail. Get a piece of oiled silk, which you can do at any dry-good store—enclose it with two or three stamps to your correspondent with directions to wrap the scions in the silk; in this way they may be received from any part of the United States.

DRY SCIONS.—Scions that have become dry (not injured by water) may be buried in ordinary garden soil one or two weeks and become perfect—which if inserted without may be worthless. This is also the true mode of treating young trees, from dry transportation. Bury *the whole tree* one or two weeks before planting, and a healthy vigorous growth is obtained, instead of a sickly and slow one.

C. GOODRICH.

Burlington, Vt., Feb., 1854.

REMARKS.—Will Mr. G. accept our thanks for the above article, and send us the other which he says in a private note "some one should write on pruning orchards in our cold New England climate." That important operation is still very imperfectly understood, notwithstanding so much has been said on the subject.

MAINE STATE BOARD OF AGRICULTURE.

This institution seems to have started rapidly into vigorous existence. Col. HENRY LITTLE, of Bangor, is President, and EZEKIEL HOLMES, Esq., editor of the *Maine Farmer*, is Secretary. If the Board is made up of such men, it will plow a deep and permanent furrow into the prejudices which exist, and make many a field smile in beauty which has heretofore presented but a barren and chilling aspect. The men of Maine—and especially the farmers—should come up to their help with the most liberal views; they should give tone to legislative opinions, and assure that body, that in promoting the objects set forth by the Board of Agriculture, they are giving shape and direction to the will of the people. Whatever the State may do to benefit the people, will replenish her treasury, and who can doubt that to complete the survey of the State, already commenced, will result in such discoveries of coal, or the precious metals, as shall a thousand times repay the cost? Or, if she institutes experiements, and shall show how each acre shall produce one more bushel of grain, or each cow one more quart of milk, will not that increase the taxable property of the people, and thus add permanent wealth to the State?

Among the principal points at which the Board aims, is,

1. To introduce the study of agricultural science into every school in the State.

2. To endow a seminary in each of the 13 counties in the State for the study of the higher branches of the science.

3. To urge the legislature to cause the Geological survey of the State to be completed.

HAMPSHIRE AGRICULTURAL SOCIETY.—Officers for 1854.

ALFRED BAKER, President.

J. W. BOYDEN, Secretary and Treasurer.

Hereafter, their Fair is to occupy two days, instead of one.

HUSBANDRY ADAPTED TO MAN.

BY J. N. BAGGE.

No one who has carefully observed the ingenious mechanism of man and the multiform works of the husbandman, can fail to notice the adaptation of each to the other. The cunning hand, the strong arm, the broad shoulders, the robust body and the active mind, all require exercise, and each in proper proportion.

Other pursuits call into action only parts of the human frame. The right arm of the blacksmith by undue exercise becomes strangely disproportioned to his left. The manual dexterity of the manufacturer overbalances the powers of his mind. The mental activity of the professional man exceeds his physical endurance; so of most other vocations.

The rule is, that other things being equal, that pursuit which most effectually calls into use the greatest number of the faculties, which most regularly and evenly exercises the limbs, muscles and other organs, is the best adapted to man.

Where in the whole range of man's employments can an occupation be found so suited to this object as agriculture, or where a more perfect specimen of humanity, than a healthy, intelligent farmer?

God knows the fitness of things better than any of his creatures: hence, He ordained agriculture. He gave man, his rural commission, He placed the first human pair in a garden, and He directed that happiness and health should attend its pursuit.

To the pale, sickly and feeble, of every class we would say,

"Would you be strong, go follow up the plow;
Would you be thoughtful, study fields and flowers;
Would you be wise, take on yourself a vow
To go to school in nature's sunny bowers;
Fly from the city, nothing there can charm,—
Seek wisdom, strength, and virtue, on a farm."

For the New England Farmer.

CIDER AND TOBACCO.

These are among the products on many of our farms for which encouragement is offered, and towards the production of which, much labor is expended. Can this be done with propriety?—Orchards are recommended as the most productive occupation of land; hundreds of trees are annually set, for the purpose of producing cider—and will continue to be set, so long as the public demand, and use it. So with tobacco. If I am not misinformed, some of the most profitable crops, grown in the valley of the Connecticut, are found on the tobacco fields. What care I, says the grower, who is injured by its use, if I get my money for the crop? If I do not grow it, some one else will—and I may as well have the profit as to send it to Cuba, or elsewhere out of the country. If I do not mistake, a large part of the *tobacco-smoke* that is daily circulated, and puffed in our faces to the great annoyance of decent people, proceed from Spanish cigars, made of Yankee tobacco. If any one requires proof of this, let him stop a few minutes in a grocery store where loungers assemble, and then go home, and his clothes will give the testimony.

January, 1854.

A MODEL POULTRY HOUSE.

Fig. 1.

In consideration of the profits arising from the keeping of Poultry, as well as the very general interest now taken in this delightful feature of the Farm, we have devised and had engraved the beautiful *Poultry House* represented above, and which we think will be acknowledged by all a Model House. The front should face the South, and the yard placed on either side, as taste or convenience may suggest; but so long as the ground is uncovered the fowls would enjoy a range on the south, and would be benefited by coming to the ground. After snow falls they will rarely leave the building.

A house of this description say 8 feet wide, by 12 feet long and 8 feet high—will accommodate from 20 to 30 fowls, and that is as many as can profitably be kept together, unless they have a wide and free range.

A portion of the yard should afford a dense shade of low trees and shrubs, to which the fowls may retire in hot weather, where they will burrow and spend much time in the most social and agreeable manner.

Figure 1, is a perspective view, and beautiful it is. Fig. 2, is the ground plan; *a*, is the door-way; *b*, the grain chests; *c*, the feeding boxes; *d*, the stairway to the loft; and *e*, a small opening for the fowls to pass out and in. The opening at the left of *a*, is the door-way from the entry into the main poultry room. Directly over the

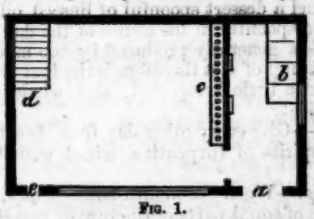


Fig. 1.

feeding boxes there may be placed another row for nests, 3 or 4 feet from the floor, which may be examined through a slide from the entry, without entering the main room. These boxes may be

darkened and made a little secret, by placing a shelf along in front of them and nailing a board edgewise against it; and as Miss Biddy, like some others of the gentle sex, is a little prudish, at times, it is well enough to indulge her fancies. On a floor under the window in the roof, the fowls will find a warm place in which to congregate in the winter.

Now that we have furnished the accommodations, we will copy from an English paper some excellent rules as to feeding and treatment.

"The floor should be cleaned at any rate once a week. It should be sprinkled with saw-dust, ashes, peat, or—best of all—peat charcoal. The nests should be lined with moss, heath, or short straw; neither long straw nor hay should be used—the darkest nests are preferred by the hens." A *Poultry Yard* should contain: 1, A grass plot; 2, fine gravel; 3, slacked lime, or other calcareous matter; 4, ashes kept dry by being placed under cover; 5, pure water. *Eggs:* Hens of the best varieties will lay in a season from 160 to 210 each, per hen. *Breed:* Evidently the best are the Dorking, "fowls which have black legs are the best for roasting, while those with white legs are the best for boiling." For laying, the Dutch every-day layers or the Spanish are excellent. *Sitting:* Having observed that the earliest chicks in the neighborhood were every year in possession of the same person, we were induced to ascertain the cause. We found that the eggs were not taken from the nest, and, as soon as she had about 13 she commenced to sit. Fowls indeed, in their native haunts, never lay more eggs in a season than they can hatch. Those who keep Dutch every-day layers, or the Spanish hen, should keep three or four Dorking hens to do the hatching business. Remember that no success can be expected from poultry keeping—1st, if their houses be damp, cold, unclean, or badly ventilated; 2nd, if the food they eat does not closely approximate to that which they obtain in a state of nature, viz: a mixture of vegetable and animal food; 3d, if the water they drink be stagnant, the drainage of the manure heaps, &c.; 4th, if the strongest and handsomest be not bred from.

DISEASES AND REMEDIES OF POULTRY.—Provide if you can a separate place for the sick.

Chipping.—This singular and fatal disease of the digestive organs often proceeds from exposure to wet or cold. Remove the chickens to a warm and comfortable place; if they appear very ill put them into wool or flannel; add to half a pint of thick gruel a dessert spoonful of linseed oil, give half a tea-spoonful in the course of the day.

Flux—Is generally produced by too much soft food; change of diet therefore is the best remedy, while rice, a little hemp seed, and whole wheat, are excellent.

Gapes.—Give every other day from five to ten drops of spirits of turpentine, mixed with barley meal.

The Pip.—Wash the mouth twice a day, with a mixture of equal parts of tincture of myrrh and water; a more simple remedy is to rub some common salt on the sore place.

The Roup (the Gargle in Geese.)—This is one fatal result of ill-feeding and want of cleanliness. Medicine can do little; give one grain of antimonial powder twice a day in a little mixed food.

Vermin.—Keep them clean; provide and keep dry dust for them to bask in; and also fresh fine gravel for the sake of the small pebbles which they need for their gizzards.

AGRICULTURAL STATISTICS OF FRANCE.

The agricultural population forms three-quarters of the inhabitants of France. There are 29,000,000 of individuals domiciliated out of the cities.

The surface of the cultivated lands yields, on an average, $1,030,530,600 (dollars), or $48 per 2½ acres.

The expenses of culture amount to $601,252,200, that is $28 per 2½ acres, which are paid as wages to the laborers, or earned by them on their own land.

This sum divided among six millions of agricultural families, gives each of them a yearly income of $100, which allows them each about 27 cents a day to spend.

The most important article of expenditure is corn. At 9 bushels an individual, it requires 39 or 42 for the entire year. This is an expense of 42 to 46 dollars a year, according as corn is worth 3 or 4 dollars. There remain for the other necessities of the family at the most 58 dollars.

When in years of scarcity corn is worth 5 or 6 dollars the hectolitre, (about 3 bushels,) the food of five persons, in bread only, amounts to 60 dollars or even 84 dollars, which absorbs within 16 dollars the whole income of the year.

To procure only a pound of meat a day for the six millions of families residing in the country, and consisting of 29 millions of individuals, it would require 2,190,000,000 pounds, that is to say double the total actual consumption of France —*Boston Post*.

SOMETHING NEW—VEGETABLE PEARS.—The *Galveston News*, Texas, notices the production of an article of food, which he calls vegetables, grown in that State. They were raised on the plantation of a Mr. Compton, and are about the size and shape of very large pears. We understand they are a tropical production, being brought from Havana. The pear is planted in the ground, and produces a vine of most luxuriant growth, running a great distance, and requires some support to keep it from the ground. It is said to make an excellent arbor. The fruit grows pendant from the vines like gourds, and is nearly white. This vegetable is boiled whole, and then sliced and eaten with butter, the taste resembling that of green peas. It is said to be very prolific, two or three vines yielding enough to supply a common family. Whether it will succeed well in Texas, which is about the 30th degree of latitude, is yet a matter of experiment. Indeed we cannot hear that it has ever been raised by any one in Texas except Mr. Compton.

MIDDLESEX COUNTY SOCIETY.—The Trustees of this Society will be duly notified of the time and place of holding their Annual Meeting, at which time it is desirable to distribute the Transactions of the last year, and which are not yet completed.

For the New England Farmer.

THE DOUBLE PLOW, AND HORSE HOE.

It was well said, at one of the late farmers' festivals, that the inventive genius of the country had turned to the relief of the wants of the husbandman, and that it almost seemed as if the farmer was to be buried beneath the mass of new machines and implements, which had been made to relieve him, in part, of the burden of his labor. All new tools, however, are not improvements. But the past year or two has brought into use two implements which, it seems to me, are particularly deserving of notice. I refer to the *Michigan Plow*, as improved by Messrs. Ruggles, Nourse, Mason & Co., and to the *Horse Hoe*, also manufactured by the same firm. I recollect, that in one of the past No.'s of your paper, you spoke in praise of this last implement, after witnessing an experimental trial of it. In your conclusions, as to the value of the implement, I agreed then; and promised myself to say a word in its favor, if deserving of praise, after a more protracted trial.

The Horse-hoe is designed to supersede the common Cultivator; and, after the trial of one season, I do not hesitate to say, is of far greater value. In my hands, the old Cultivator was of but little value. It was difficult to manage, from its sliding to the right and left,—frequently became clogged—and never did the work to my desire.

The *Horse Hoe* is free from these objections. I have used it this year, and have had neither the necessity nor inclination to remove my Cultivator from its winter quarters.

My corn field was so overrun with wild turnips that I was compelled to go into it while the corn was so small as to render it difficult to distinguish the rows. A common Cultivator, run under like circumstances, would have buried much of the corn. But I was enabled, with this instrument, (running steadily as it does,) so arranged, as to draw the earth from the hills, to cultivate the field so thoroughly, as to remove almost all the turnips. By running twice between the rows, in each direction of the field, so little of this pest was left, that I did not deem it necessary to follow with the hand hoe.

The second time of weeding, the implement was run in a similar manner; and after the field was finished with the *Horse Hoe*, so few weeds were left, that my two hired men occupied less than a day in performing the remainder of the work by hand. I am safe in saying, that after the second and third time of cultivating there was hardly a weed left undisturbed in the whole field, unless it grew among the stalks of corn in the hill.

It was my experience, and I think it will be found universally true in practice, that when the *Horse Hoe* is used, with the teeth so set as to throw the earth *from* the centre towards the rows, with a good walking team, the dirt will be so finely and thoroughly sifted in among the corn, that all small weeds growing there will be completely covered up, and the necessity of hand hoeing or weeding almost entirely prevented. I am inclined to think that manure may be covered, when not strawy, better by this instrument than by any other: *better* than by the Cultivator; because of its little liability to clog: *better* than by the *harrow*, because it pulverizes the soil beautifully, and leaves it light and in fine tilth—*better* than by the plow, only because of its more rapid work, covering a greater breadth of surface. I shall try it in the spring for this purpose, without fear of being disappointed. Yours, W. S. LINCOLN.

REMARKS.—We have no doubt this article will be read with a deeper interest by some, when they learn that Mr. LINCOLN does all the plowing and cultivating for a pretty large farm, with his own hands. He confirms the opinion we have heretofore expressed in regard to both the implements whose merits he has discussed. The mantle of the lamented Col. LINCOLN has fallen upon a worthy representative.

THE ASS AND THE LAMB.

"How hard is my fate!
What sorrows await,"
Said the Ass to the Sheep, "my deplorable state.

"Cold, naked, ill fed,
I sleep in a shed,
Where the snow, wind and rain come in over my head.

"All this day did I pass
In a yard without grass:
What a pity that I was created an Ass?

"As for master—he sat
By the fire, with the cat,
And they both look as you do, contented and fat.

"Your nice coat of wool,
So elastic and full,
Makes you so much to be envied—ay, more than the bull."

"How can you pretend,"
Said her poor bleating friend,
"To complain? Let me silence to you recommend.

"My sorrows are deep,"
Continued the Sheep,
And her eyes looked as if she were ready to weep.

"I expect—'tis no fable,—
To be dragged from the stable,
And, to-morrow, perhaps, cut up for the table.

"Now you—with docility,
Strength and civility,—
Will live some years longer in all probability.

"So, no envy, I beg,
For I'll bet you an egg,
You will carry the spinach to eat with my leg."

For the New England Farmer.

WEIGHT AND MEASURE OF CORN.

At the late Legislative discussion on this subject, (at which very few *Legislators* were present) there appeared to be a wonderful discrepancy in opinion as to the product of corn in different parts of the Commonwealth. One gentleman said he had seen in the county of Berkshire, the present season, forty different acres, each of which yielded more than one hundred bushels to the acre—another said that he knew an acre in the county of Plymouth, that yielded (*as measured*) one hundred and fifty-nine bushels—and other gentlemen from the counties of Worcester and Essex, said they had never seen an acre of corn that yielded fair measure, so much as one hundred bushels. I had supposed some as good and as productive land existed in these last mentioned counties, as any in the Commonwealth, unless there may be some superior along the banks of the Connecticut.

The mode of cultivation must be better, or the

mode of measurement must be different, in those sections, where the large crops are reported. I consider a bushel of corn to be 56 lbs. when dried and fit for use—and have supposed this corn would weigh about 14 lbs. more when green—making the weight when taken from the field, 70 lbs. I understand the rule adopted, in weighing corn in the ear green, is to consider 80 lbs. to make a bushel when dry—this allows only 10 lbs. for the weight of the cob—one-half more than this should be reckoned; even so reckoning, I think there must be some error in the computation that reckons one hundred and fifty-nine bushels to the acre. On conversing with a gentleman, who lived in the neighborhood of this reputed large crop—he said the proprietor told him when he shelled it dry, it measured less than 120 bushels—taking off 40 bushels at least, from the reported crop.

Not doubting that all who were concerned in these crops meant to be honest—I think one thing was made very clearly apparent, in the discussion, that a more precise way of determining the quantity raised is absolutely necessary—if the crops in different towns, or different counties, are to be compared with each other. Our *Board of Agriculture* should begin to look after these things, or the people will soon be looking after them.

Jan. 26, 1854. VERBUM SAT SAPIENTI.

MR. COMING'S ADDRESS

The *Connecticut River Agricultural Society* held its last Annual Fair at Lebanon, N. H., September 22, 1853. The Address was by the Rev. A. G. COMINGS, of Mason, N. H., a copy of which is before us. After giving a brief, historical sketch of agriculture in the past, and touching upon our present condition and wants, the Address abounds with excellent practical suggestions and sound teachings, of which we quote a few:

FOOLISH FARMING.

As there will be fancy farming, so there will be, doubtless, a great deal of foolish farming. By foolish farming is understood that kind of procedure which every man might foresee would be unprofitable to the farmer.

We frequently hear men saying that their fathers, with little labor and trouble, could raise much larger crops than they can now by the same or any other process. Yet they will strenuously contend that the way of their fathers is always to be perpetuated. They have full and clear evidence that the soil has been exhausted—that it is not now productive; but they will learn no better way. They know that they make no profit from farming, but they continue it! Their soils grow poorer and poorer every year; yet they contend that it is the very best way of farming! What folly! What blindness!

There are hundreds and I presume to say there are thousands of farms in New Hampshire, which are now in such an exhausted condition that the whole proceeds of them yearly would fall below the cost of cultivation and the taxes assessed on them. If a man could have one of them given to him, and be obliged to pay taxes upon it and hire it carried on, he would sink into debt every year. This is to continue the case in future, for such of our farmers seem to despise the very idea of learning anything about farming. They look upon our agricultural societies as "a piece of speculation," and upon all ideas of agricultural improvement as "a humbug."

There are others who continue to use the most miserable tools that they can pick up, for no other reason but because they can buy them cheap.—Nothing is done well on their farms, for there are no tools with which anything can be done well. Their deficient culture is followed by deficient crops, and an absence of profit. It costs them as much labor for a poor crop as it would have cost for a good one. If a good crop would have afforded a moderate profit, a poor one leaves a loss to the farmer.

Another folly in farming is to cultivate more ground than can be manured. In all such cases loss is certain to the cultivator. Nothing else than high culture affords a real and lasting profit. Crop the ground without manuring it, and you will lose money by it, and the ground will become worthless. There will, undoubtedly, continue to be such farmers.

PROFITABLE FARMING.

Farmers will in future time come to understand that the earth and the air are both full of wealth to them. They will understand that the deeply bedded clay and the hard pan which is hidden far down in the ground are worth something more than merely to hold the world together. They will be found opening deep and broad drains, in the operation of which they will obtain valuable material for top-dressings on their upland, and at the same time make their low lands of much greater value by relieving them of surplus water. They will discard the idea of cultivating much land for the use of a little manure, as requiring much labor and tending to penury. High cultivation, without fancy farming, will be the way of the successful farmer of future time.

The importance of thoroughly pulverizing the soil will be better understood, and the value of the subsoil. Men who know little or nothing, by experience, about the use of plows, and other farming implements, and men who can understand no principle of science, will not much longer be trusted and credited in making and recommending such implements. Farmers will have all these things tested by science and by experiment. The plowman will also come under new orders. He will learn that his object is no longer to be the plowing over as much ground as possible in a day; but, to thoroughly plow and pulverize every inch of ground he goes over.

The conditions of respectability will be somewhat changed. The young man will not think it a dishonor to him to work on a farm. The young woman will no more think herself degraded by familiarity with the kitchen. Intelligence, industry, usefulness, will measure merit and establish a title to respect. These things we ought to consider now.

HOME GUANO.—While accounts are reaching us of the increase of the price of guano at the Lobos Islands and elsewhere, Mr. Wm. Herepath, analytical chemist, announces in a late *London Times*, a cheap, prompt, and effectual means of economizing town sewage, so that very nearly all its useful ingredients, including its ammonia, may be con-

verted into a guano intermediate between those of Saldanha Bay and Patagonia, having a fertilizing power of from five to eight times that of farmyard manure. In this way, he says, a vast quantity of fertilizing manure may be made, and, as all the products are deodorized, the sanitary condition of cities may be greatly improved by the process. *Traveller.*

For the New England Farmer.

SHADE A FERTILIZER.

Mr. Brown:—Dear Sir,—on returning home yesterday, I read in that copy of your paper I took with me, an article upon fertilizing land without the aid of manure.

The writer offers a new solution for the natural fertilization of the earth; and as his theory will not be found to explain the facts as universally observable, I have taken it upon me to offer some qualifications to his remarks; of the fact of this self-fertilization no one can doubt; and doubtless many have wondered that such vast crops of wood do not injure the soil, since to follow wheat with corn or any other grain, in bulk bearing no comparison to the trees, for several years, materially injures the earth's productive power. But no one who has given a close examination to the subject, could endorse the writer's following wholesale remarks.

"Now I ask, how the fertility has thus been kept up, if the shade does not tend to fertilize? My opposer may say it is kept up by manure made from the leaves of the trees. I will admit that the foliage tends to fertilize, but as the quantity of matter returned to the soil in this way is so small compared with what is taken up by the growth of the timber, it is very evident to every wise husbandman, that there must be another great source of fertilization, or the soil would soon become exhausted."

Many facts that seem utterly inexplicable to men's reason are quite clear under the combined light of reason and experiment. It *is* very absurd to suppose the mere return of leaves to the soil could compensate for the material extracted in the growth of the tree, *if the tree draws from the soil all its component parts.*

Such is not the fact; and thousands of experiments have shown Boussingault, Liebeg, and other philosophers, that the difference in weight between the materials of vegetable life existing in the soil before and after the crop, is not relative to the weight or bulk of matter grown upon the surface, but to the manure supplied.

Perhaps a few figures would make my meaning more clear. Boussingault made many experiments to test the quality of carbon in a soil, before and after cropping, and thus judge of the value of manure. For instance, in the spring he ascertained the quantity of carbon in the soil, and then added 2512 lbs. to the acre; on analyzing the crop in the fall he found 7544—a gain of 5031 lbs., leaving the same amount in the ground as he found there;—this increase must have been derived from the air; and had the 2512 lbs. not been supplied, the amount remaining in the soil would have been just that much less—and in a course of years none at all.

This is what farmers mean by keeping land in good heart. A second experiment was upon Nitrogen, another most important vegetable constituent.

He ascertained the amount of Nitrogen, and then added, through three rotations of crops, the following amounts to the soil: 1st, 406.4 lbs.,—the crop gave 501.4 lbs.;—2nd, added 406.4 lbs.—crop gave 508.4 lbs;—3d, added 487.6 lbs.—crop gave 707.2 lbs. Thus we see each time the gain from the atmosphere very much exceeded that which the manure supplied.

Such facts teach us the need of manure, and why improvident farmers ruin their lands, better than all the reasoning in the world.

It will, therefore, be readily seen how it is that the trees of the forest supply in their leaves all that is necessary to keep the land in good heart, and a little more, for as your correspondent very justly remarks, land is benefited by being cropped with trees a number of years in succession, and that the benefit is not derivable from the shade, *as such*, but from the vast amount of nutriment drawn from the air into the soil by the lungs of the plants, a very large proportion of which remains there. A familiar illustration of which, is, the man who, having acquired a fortune, invests it, and lives on the interest; if he spends all the interest, he keeps at the same point of wealth; but if he does not use all his resource, and lays by a portion each year, he in time has a large surplus to re-invest. The forest is this surplus increase, and a little more; when we draw from the woods the leaves, we not only eat into the originally invested money, but reduce any surplus increase in equal ratio. The true reason of the benefit of shade your correspondent has dimly shadowed when he says:—"Putrefaction may be considered the ultimate result of vegetable and animal decompositions, because it forms the only product incapable of any other change. The surface of the earth will readily undergo the putrefactive process, if favorably located, that is, if densely shaded:" and yet it will not do to accept this statement in just the form he gives it. When the soil is densely shaded, the components of the earth continue in their regular routine, and aided by warmth and water, the various gases are still evolved, and the minerals disintegrated and brought into such forms as may be best appropriated by plants; when, therefore, the earth is shaded so that none of the volatile gases may escape with the air, they are all retained below the surface. If, however, not shaded, as in a common fallow field, many of them evaporate, and others are used by the weeds, &c., that will grow in spite of us. It is found necessary to reduce the weeds, to plow, and whilst plowing opens the earth to new gases, and more sun and rain, it also tends to evaporate many desirable aids to vegetation, hitherto securely buried under the hard surface.

Nor can we use anything as neutral to destroy weeds and retain the gases and moisture, that will not partially decay and add some of its constituent parts to swell the whole bulk of vegetable wealth.

When your correspondent advises a course of clover as a means of shade, &c., he advocates just the proper method of procedure, but not for his expressed reason. To follow clover upon corn, or any other crop, is merely rotation, the benefit of which all farmers are becoming sensible of; and its service to the earth is not by its shade, so much, as that it brings to the upper mould the minerals and

other aids to vegetable life, washed into the subsoil by rains, at the same time affording by the decay of its roots vast supplies of carbon to the soil, and is the practical illustration of the capitalist who does not spend all his income.

Very respectfully, R. M. COPELAND.

Roxbury, Jan. 7, 1854.

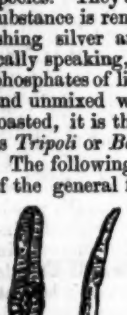
TRIPOLI, OR BERGMEAL.

Boston, Jan. 20, 1854.

SIMON BROWN, ESQ.:—Dear Sir,—On my return home from the South, I found your letter of 8th ult., with the supposed magnesia from a pond in Cherryfield, Maine.

This deposit I have examined, and I have also submitted portions of it to the microscopic inspection of Drs. BACON and SHAW, who find it to consist of the shells of infusorial animalcules of the family Diatomaceæ, of which there are several species. They are generally small, and hence this substance is remarkably fine and suitable for polishing silver and brass. The substance, chemically speaking, is, silica and water, with traces of phosphates of lime and magnesia. It is very pure, and unmixed with sand. When it is dried and roasted, it is the substance known in commerce as *Tripoli* or *Bergmeal*.

The following sketch will convey to you the idea of the general forms of these infusorial animalcules. They are very common in all our peat bogs, and most abundant at the bottom of the bogs, and are also found in ponds.



Baccillaria Navicula.

The species gallionella, are exceedingly abundant in the deposits from the water of Cochituate Lake. Indeed, the gelatinous deposits which this water leaves in our cisterns is made up of many species of diatomaceæ, and an atom of this deposit big as a pin's head shews a multitude of them, and will form a study for hours. I do not remember how many billions of infusoriæ were found by Erhzenburg, in a cubic inch of the Bergmeal, of Germany. I remember that it took some hundreds of thousands of them to weigh a grain. This curious deposit teaches us, when we look at it with a microscope, that

"The very dust we tread upon was once alive."

Respectfully, your friend and obt. servant,

CHARLES T. JACKSON.

P. S. A few days after the Cochituate water was introduced into our houses in Boston, I collected a large number, probably many millions, of a little crustacean animalcule which abounds in the water, by reversing my sand filter. I then collected them on a paper filter, and taking a spatula full of them, I placed it over my spirit lamp, in order to dry them, for the purpose of burning off the animal matter, so as to collect the shells, if they had any, for analysis, to see if they were composed of carbonate of lime, like the coverings of our larger crustaceans. The moment they were heated to the boiling point, they became of a fine *lobster red color*, and I thus was able to verify a suggestion in Peter Pindar, when after boiling a flea he is made to exclaim—

"Fleas are not lobsters, d——n their souls!"

Now we find by his experiment repeated on Cyclops, that if his theory is true, and his test reliable, that Cyclops ARE lobsters, d——n *their* souls! This discovery has recently been verified by DR. JOHN BACON, JR., who has boiled the cyclops under the microscope, and found that "they became of a fine red color—orange red, by transmitted light."

As to my crustacean researches on the cyclops, I did not find a distinct shell of carbonate of lime, but found the phosphates quite abundant in the ashes. The cyclops may beseen in any glass of unfiltered Cochituate water, by the naked eye, and by reversing the filter, and letting a tumbler full of water run through it, an enormous quantity of them may be obtained. There are many other very curious and quite interesting animalcules in this water; among them there are some species of *Monads* of *Vestige* notoriety, as the ancestors of the human race!!! A small beginning, indeed, if the "Vestiges" is a reliable authority!

If you have a good microscope, pray take a look at a drop or two of Cochituate water, from over the sand filter, and I think you will always inquire if the water has been filtered before you drink it.

C. T. J.

REARING CALVES.

Herdsmen and others who have had some experience in raising young cattle, have expressed various opinions in relation to the most proper course or mode of treatment to be pursued, some contending with a good deal of stringency for the natural way as they term it—i.e., permitting them to enjoy the company of their dams till four, five, six or ten months of age, while others assert with equal pertinacity, that the better way is to separate them from the cows when a few days old, and raise them, "by hand." The farmer of course will reflect upon the relative advantages of the two methods, and consider the claims of each to preference before he adopts either. But after all, whether the one or the other is most expensive, will depend wholly, or in a great measure, upon the circumstances of time and place. In very many localities, the butter and cheese a judicious and economical dairyman would be able to realize from the milk, or from the milk itself, without manufacturing it, would be worth more in ready cash, than the carcass of the calf, while in others, it would scarcely defray in the market the cost of manufacturing, while the calf would be valuable. A friend who has had much experience in dairying and rearing calves, has directed attention to the following able article on the subject in the *Genesee Farmer*. We present it from that sheet as conveying a most lucid and readily understandable synopsis of our own views of what, in a large majority of cases, would unquestionably be found the most judicious and economical course, for the farmer engaged in stock raising for the market, to pursue.

"The cost in both cases ought to be taken into consideration. In the first instance, the butter and

cheese, which might be made from the milk would amount to more in four months, than the value of the calf at that age. In the latter the proceeds of the milk are nearly attained independent of the raising of the calf. This can be established by unquestioned and unquestionable authority. Then there is a very great balance in favor of the latter.

That the calf that runs with the cow four months, will somewhat exceed in growth and proportion the one reared by hand, is readily granted. But after that period, it is taken from the cow, and has to graze to get its own living. There is a change of diet takes place; it shortly becomes stunted; its growth is checked, and this too at the very period when it ought to be in the most thriving condition. The one reared by hand becomes more and more accustomed to food, continues gradually to improve without receiving any check in its growth, and when winter arrives, is in far better condition than the others.

There are different procedures in preparing the mess for the calf. Each one has a favorite plan. One mixes with a small portion of milk, a portion of boiled potatoes and fine bran. Another boils the milk, and lets it stand till it cools to the temperature of milk from the cow. The plan most generally adopted (and perhaps the best,) is, to let the milk stand twelve hours, at first, when it is skimmed, heated to the temperature of the cow and a handful of shorts and flour added to each calf's mess. Four or five quarts of milk is at first a proper quantity. This is to be gradually increased as judgment can best decide. After four or five weeks, whey, with a small quantity of shorts added, can be taken with equal success. Calves raised in this manner are more gentle and docile than when they run with the cows, and can be better managed through the winter, and most generally afterwards. Another very important consideration is, they soon forget their mother, and the trouble of keeping them separate through the fall and winter is dispensed with."

For the New England Farmer.

MOUNTAINS OF VERMONT.

The mountain scenery in this county is the most sublime and beautiful of any in the State. The two lofty ranges on each side of our valley, "clothed in living green," are "beautiful to behold;" and their pure, healthy breezes, in the warm season, are refreshing to the "weary laborer." But it is not *always* in the warm season, that they appear in their greatest splendor. At this cold season of the year, the damp vapor of the atmosphere is frequently congealed in starry frost, on every tree, bush and twig, that cover the mountains. They are then covered with a *crystal forest*, from base to summit, the beauty and splendor of which, as it sparkles and glistens in the bright rays of the sun, no pen can describe, no pencil imitate. Mansfield mountain, west of Stowe, is the highest of the "Green Mountains." It is a profile of an "Old Fellow" on his back, yet ever looking upwards—a good example for others to imitate. His "phrenological developments" are somewhat intellectual and *peculiar*. The top of the head and forehead are regular; the "nose" prominent, and the "chin" *more so*—being the highest *place* in Vt. The people have made a horseback road up to the "nose." It is three miles from where they leave the carriages to the top. Half way up is the celebrated "cold spring," where they intend to build a house next season, to "accommodate the travel." Under the nose, at the nostrils, issues another spring. Here are the camps, where the ladies and gentlemen stop over night, "take tea," &c.

About a mile and one-half north of the "nose," is the chin. Both "nose and chin" are bare rocks. Some adventurers have erected a little stone monument on the chin, which is the highest *point* of the Green Mountains, being more than 4300 feet above Lake Champlain. The number of visitors to this mount have greatly increased within a few years, and will much more, as it becomes more *known*. The view from the top is conceded, by those who have visited many "celebrated places," to be the most splendid and sublime of any in New England. You not only have a view of the *many* peaks of the Green Mountains in different directions around you; but also of the White Mountains in N. H., and the Adirondic in N. Y. To the west can be seen Lake Champlain, with its many beautiful isles, and the white sails and steamboats furrowing its lovely bosom. But not the least enchanting view, are the beautiful *farms* and pleasant villages in the lovely vales beneath you. Those who delight to see such views, and breathe the pure mountain air, can find folks and things at their service at Stowe, Vt., another season.

MILAN.

Morristown, Lamoille Co., Vt., Jan. 10. 1854.

THIRD AGRICULTURAL MEETING,

AT THE STATE HOUSE, TUESDAY EVENING, JANUARY 31, 1854.

SUBJECT—*What can be done to make the Home of the Farmer more attractive and agreeable?*

The meeting was called to order at half-past 7 o'clock, by Mr. SIMON BROWN, who remarked that the Secretary of the Board of Agriculture had been charged with the duty of procuring a lecturer for this evening, but had been prevented from so doing, by pressing engagements and ill health. Mr. Brown then invited His Excellency Governor WASHBURN, who was present, to assume the duties of the chair for the evening.

Governor WASHBURN complied with the invitation, and on taking the chair, briefly addressed the audience on the subject for the evening's discussion. He said he did not know but what he might be charged with being guilty of a solecism, if he should assume that anything could be done to make the home of the farmer more attractive and agreeable. The poets have always sung of the charms of a rural home, from the days of Homer down to the present time. The farmers are, undoubtedly, the happiest class in the community, but it is not to be supposed, that they are entirely exempt from the trials and cares of life. Therefore, we may assume that something may be done to improve the home of the farmer. But he feared a greater solecism might be charged upon him in dwelling on this theme, for he had never, since manhood, been engaged in agricultu-

ral pursuits; but if the reminiscences which came thronging to his mind, of a participation in early life, in the duties of taking care of a small farm, could be urged as a qualification, he felt that he might claim to speak in some measure as a farmer.

What can be done, then, to make the home of the farmer more attractive? In the first place, it will hardly be contended that any change in his physical condition is necessary—especially here in Massachusetts, where, although the soil is sterile and the climate uncongenial, the farmer enjoys inestimable blessings in political, social and religious priviliges. No great change can be looked for or desired in this respect. Then wherein can change be made? There is one thing; there ought to be a more decided contentment and satisfaction with the condition in which he is placed, on the part of the farmer; he should also understand his relative position in society better than he does. The speaker thought there was a false estimate in the community of the true position of the farmer. How do we find him situated? A man with a large family, perhaps, and with straitened means. He sees men in other callings obtaining riches easier and more abundantly than himself. Those who enter commercial pursuits, rapidly outstrip him in the race for wealth and distinguished position, while those who enter the professions, as they are termed, run a more brilliant career, and obtain high distinction—and all this gives him the idea that his sphere in life is too much confined—his energies too much cramped. His occupation has been too generally regarded as one of mere *labor*, not as intelligent, thinking, activity. This is a false system. Men should regard farming as it stands in relative importance to other pursuits. It is a profession of which any one may feel proud, embracing science of the highest order, and is inseparably connected with the best interests of society; and farmers should hold up their heads and take their rightful position in the community.

Governor WASHBURN urged upon his hearers, as a means of elevating the farmer, that they should act together, and come together, as a class, a scientific class, and as pursuing the most important calling of society. Let there be an *esprit du corps*, and let it be known as a high and respectable profession, and farmers cannot help taking their true position in society.

Another way of improvement will be in sustaining the county and State agricultural societies, attending their meetings, and discussing there the matters of general interest to the profession. This will cause the farmer to feel his own powers, and increase his consideration in the community.

He also alluded to the cause for congratulations which the farmer of Massachusetts has, when he compares his condition with that of the farmers in other sections of our country, where, perhaps, the soil is richer, but where the blessings of churches, schools, and other beneficent institutions, do not cluster in such rich profusion as here. Go abroad and witness the condition of the agricultural population of Europe. They enjoy no such social privileges, no such independence as the farmer of the United States enjoys. We are as much above them as our government is better than theirs. The farmer of this country is free from the landlord's tax, which grinds them down. In Europe one-fourth of all the farmer produces is wrung from him by government. In matters of food, and in many other respcts, the condition of the American farmer is equally superior. He believed that a farmer visiting Europe, as he had done, and witnessing all these things, would return to his home in Massachusetts with the deep conviction on his mind that his own home, though it may be improved, is yet *better than any other on earth*. As a proof of the influence of the agricultural interest, it gave him pleasure to know that more than half of the members of our present House of Representatives are farmers.

On concluding his remarks he called upon Mr. PROCTOR, of Danvers, to address the meeting. Mr. Proctor said one of the first ideas which entered his mind in taking up the subject of discussion was how to induce the sons of farmers to remain at home and engage in the profession of their fathers. It is true as a general rule that they look around on becoming ready to engage in life for themselves for some profession which will yield them distinction and a competency earlier than that of farming. They find that while they cannot earn more than two, three, or four hundred dollars per year at farming, young men in the cities are making as many thousands. He thought there was another side to this matter, however, for while it has been ascertained that but ninety out of one hundred who engage in commercial pursuits, eventually succeed; he believed that, with habits of sobriety and industry, and by avoiding speculation, any man could, by the time he was 40 years of age, secure a comfortable property, and live in the enjoyment of plenty, and happy associations. He believed farmers as happy and respectable a class as any in the community. They have more time for study and reflection, and less cares and anxieties than any other class. If we can make our young men believe this, home will be made more attractive and agreeable.

Mr. JOSEPH SMITH, of Hadley, made a few remarks in regard to the importance of educating farmers' sons especially for that calling by providing schools and colleges for that purpose. He thought the present system of education led them to believe that other pursuits were preferable to farming.

Mr. M. HALE SMITH, of Boston, was next called on

for remarks. He looked upon the subject as one of great interest to the farmers of Mass. and New England. In order to make home attractive to children, he would do three things—1st, magnify the present power of home; 2d, dignify labor in the estimation of children; 3d, endeavor by liberal expenditure to meet the reasonable expectations and desires of the child, by making home happy, and the source of intellectual pleasures.

First. The child should be made to feel all the hallowed associations of home, so that they will follow him through all the vicissitudes of life. He believed that there was nothing so endearing as the home of the farmer, upon the hillside, or by the stream, with their numberless quiet beauties. God has planted in us the power of association, and the scenes of a loved home will be mentally present with us, through all the days of life. When men go abroad in pursuit of wealth, even to far distant climes and to novel scenes, and gain the object of their pursuit, what desire takes possession of their minds? Do not their hearts turn fondly to the memories of childhood, and as the crowning point of their career, do they not come back, and purchase the old homestead, there to spend their old age?

Second. Our children should be taught the dignity of labor, for it is this which has made Massachusetts what she is. It is *occupation* that confers happiness, not wealth. An aged and wealthy merchant was once asked if he was not rich enough? He replied yes, and was then asked why he did not retire from business and enjoy that rest which he was so well able to afford? He replied that he could not live without *something to do*—idleness would make him crazy. He would have young men understand that if they would be happy, they must be industrious. It is the power and glory of Massachusetts. She can raise men and nations, because she dignifies toil.

Third Cultivate taste, and the indications of respectability about home; make it more ornamental, living less in the kitchen, and more in the parlor. We owe this to home, in order to give it those charming influences which distinguish our New England homes, and he thanked God for them, for they have given us the government and institutions under which we live.

Mr. Sanger, of Dover, urged and illustrated the efficiency of intellectual pleasures in making home attractive, Good reading is a great instrument for making our children love home.

Dr. Eddy, of Bridgewater, advocated at some length the utility of cultivating bees as a means of rendering home more interesting.

Mr. Copeland, of Roxbury, said farmers should take more pains to interest themselves in the studies and reading of their children. This would please the child, and make him feel that home is home. Many farmers are in the habit of spending their evenings at the village store, or some similar resort, instead of directing the studies of their sons. The son, without this stimulus, naturally becomes tired of studying, and prefers to go to the store also. The girls, too, should be made to love home, and not to look upon it as a place where churning and scrubbing only are to be done. They should be taught farming; and not be ashamed to know what stock is. They must be educated, too, for woman is the standard in society, and young men, in mingling in society, if the standard is high, will be elevated, but if low, will go downward.

The homestead, too, should be made to look handsome—not like barns, and even worse, as many of our farm-houses do. The power of beauty over the mind is great, and money spent in beautifying the homestead will increase the attachment for that homestead, and is by no means thrown away.

The sons should also be shown more liberality. Many of them, when they start in life, have to purchase their time of their parents, and when at home, work more like slaves or hired servants—up before daylight, work all day, and the last thing on their minds at night to look after the stock before going to bed.

Children should be taught to plant trees and flowers, and it will render their homes dearer to them, and they will be more likely to remain in it.

Mr. Brooks, of Princeton, said there had been remarks made which would lead one to suppose that the farmer was a very miserable creature. He did not coincide with such remarks. Where can you find in the community a class whose homes are happier than farmers, and whose sons and daughters are fonder of home? He was well acquainted with all classes in society, and he had rather associate with farmers than any other—they are full as intelligent as any other,—they have not taken their proper position in the community, it is true, but that is owing to peculiarities in the moral character, which have caused them to neglect their true position in society. Their failure to do this is owing to their not demanding a fair share of the profits of the community. He sells cheaper than he buys. He shrinks from the boisterous struggle for money which characterizes most other callings. When the farmer obtains his rightful share of the profits of the business of the community, they can pay as good wages as merchants or manufacturers, and their children will stay at home, and not till then. They like home better than to go abroad. He appealed to farmers to insist on their share of the world's wages.

Mr. Brooks contended, farther, that farming was profitable, and declared that he could make more money off an acre of corn in Mass., than in any Western State. He would defy any one to

controvert this. So also of pork, it can be raised more profitably here than there.

Major WHEELER, of Framingham, said he had heard that Mr. Brooks had run his farm all out, and wanted to sell. He wished to know if it was a fact.

Mr. BROOKS replied that he desired to sell, simply because he was getting old. As to his farm being run out, he scorned to praise it, but was perfectly willing to have any one examine it. He commenced with fifty acres, and two cows, and now had 150, with 40 head of cattle and one horse, having added to his land twice, and to his stock ten times. The land was originally worth $20 per acre; he now obtains interest on a value of $200 per acre. He considered his farm worth about $5000 or $6000, and he could clear $500 or $600 a year from it free of all expenses.

Major WHEELER said he was happy to hear the statement. He did not believe the story when it was told him. As he was an enthusiastic asserter of the profitableness of farming, it had been brought as an argument against him, and he made the inquiry for that cause.

Mr. SIMON BROWN was then called on for remarks, but excused himself, by saying that his premeditated "thunder," had been anticipated by those who had already spoken. He expressed a wish to hear from the Western part of the State, and alluded to Hon. WM. B. CALHOUN, as being able to respond. Mr. Calhoun, however, excused himself by pleading the lateness of the hour, it being nine o'clock, but expressed a willingness to respond on some future occasion.

Gov. Washburn then read the following list of subjects prepared by the Executive Committee for discussion at the coming meetings, and the meeting adjourned:

1. Is the *increased culture* of Indian Corn, worthy the attention of the farmers of this Commonwealth?

2. Can anything be done to make the *home* of the farmer *more attractive*;—and *to retain the sons* of the farmer in *this employment?*

3. *Plows and Plowing*,—taking into view the form of the plow,—the time and manner of using it, and all incidents connected therewith.

4. *Manures*,—preparation and application thereof; including improved fertilizers.

5. *Vegetable products*,—such as carrots, beets, turnips, &c., their value as feed for stock, compared with hay and corn.

6. *Dairy products*,—what class of animals is best fitted for the making of butter and cheese, and what is the best mode of feeding for these purposes?

7. *Culture and preservation* of fruits.

8. *Neat-Cattle*,—what is the best method of improving the stock of animals to be kept on our farms?

9. *Sheep*,—can they be advantageously kept on our farms; if so, the kind best for this purpose?

10. *Grain crops*,—wheat, rye, barley and oats—their value as compared with Indian corn, and as preparatives for grass.

11. *Forest Trees*,—can they be advantageously cultivated—if so, what varieties, and in what manner?

11. In what manner can the State most effectually advance the interests of the farmer?

It is expected that Dr. JOSEPH REYNOLDS, of Concord, will lecture at the next meeting: Subject:—*Vegetable Chemistry.*

For the New England Farmer.

CORN, COBS, AND GRINDING.

If the value of *cobs* for feeding to horses and neat stock is considered in a true light, it seems to me that many who now attribute the unpopularity of pure cob meal to the dislike of *millers* to "*grind the cobs*," (as stated in a late number of the *Farmer*,) will come to the conclusion that *millers*, even, are more honest than they are always acknowledged to be,—in this State where 1 qt. extra is allowed by law for cracking and grinding cobs. We will suppose Mr. W. carries 24 bhls. of ears of corn to mill, equal to 12 bhls. of shelled corn, for which 24 qts. of corn must be paid for grinding. Now, according to the statement of "T.W.," an accomplished and honest miller of long experience, the 24 bhls. of ears will make about 20 of cracked corn, for which 60 qts. of shelled corn must be paid for grinding. Three-fifths of this 60 qts., or 36 qts. (the cob only shrinking in the cracking) of shelled corn must be paid for the grinding of 12 bhls. shelled corn and 8 bhls. of cracked cobs, which will again shrink in grinding to 4 bhls. of pure cob meal, for which Mr. W. has paid 12 qts. of shelled corn.

Now, upon this supposition, which I think is correct, does not every one "pay too much for his whistle," when he whistles through a bag of cob meal to make his cows fatten upon the music? Can any man imagine that 3 qts. of shelled corn are worth no more than 32 qts. of cob meal? Who among our farmers would pay me a bushel of shelled corn for every eleven bushels of cob meal I will furnish? If such a contract could be made, a mill for the purpose can be made profitable in every corn county and town, doing nothing but grinding cobs.

All this supposes that millers take their toll from an average of the cracked corn, which is far from true in many, if not most cases. I have often seen the "toll corn," and seen it taken, and so common is the thing that purchasers oftener pay 80 cents for corn at the mills than 70 cents from the farm. Many mills will average ⅘ to ¾ clear corn in the toll instead of 3-5, in the above supposition.

Now I am not trifling with cobs, but reasoning a little upon paying corn to get cobs ground. I believe in the value of cobs when soaked or steeped over the fire and the toll corn ground and sprinkled on them, and then fed to cows, liquor and all. Such use of cobs is a saving of all.

A man at 100 cents per day in winter will thresh 40 bhls. corn per day with a flail. Take 2½ cents

per bhl. from your toll corn, and you have the case in hand. G. F. N.

TRADE AND SPADE.

BY CHARLES MACKAY.

Between two friends in days of old
A bitter strife began,
And Father Spade with Brother Trade
Disputed man to man.
"You're vain, undutiful and prond,"
Said Spade with flashing eyes,
"You earn your thousands while I starve;
You mock my children's cries;
You ride in state with lordly looks;
You dwell in bower and hall;
You speak of me reproachfully,
And honor in my fall.
So from this hour, in shine or shower,
We'll learn to live apart;
I ruled the earth ere you were born,
I cast you from my heart."

And Trade lost temper in his pride;
He uttered words of scorn;
"You do not know the ways of men,
Amid your sheep and corn;
You doze away the busy day,
Nor think how minutes run;
Go put your shoulder to the work,
And do as I have done.
You've all the earth to yield your wealth—
Both corn and pasture land;
I only ask a counting house,
A room whereon to stand.
And from this hour in shine or shower,
We'll learn to live alone;
I'll do without you well enough—
The world shall be my own!"

And thus they wrangled night and day,
Unfair, like angry men,
Till things went wrong between them both,
And would not right again.
But growing wiser in distress,
Each grasped the other's hand:
"'Twas wrong," said Spade, "to rail at Trade;
He loves me in the land."
And Trade as freely owned his fault;
"I've been unjust," he said,
"To quarrel with the good old man,
Who grows my daily bread.
Long may we flourish, Trade and Spade,
In city and in plain!
The people starve while we dispute—
We must not part again."

And all the people sang for joy,
To see their good accord,
While Spade assembled all his sons
And piled his plenteous board.
He fed them on the best of fare,
Untaxed the foaming ale,
And prayed in England's happy shore
That Trade may never fail;
And busy Trade sent fleets of ships
To every sea and strand,
And built his mills and factories
O'er all the prospering land.
And so we'll sing God save the Queen!
And long may Brother Spade,
For sake of both the rich and poor,
Unite with Brother Trade.

EXPORTATIONS OF BREAD STUFFS.—The *Courier and Enquirer* says that "since September 1st, there have been exported to Europe alone, from this country, 1,100,000 barrels flour; 4,750,000 bushels wheat; and 650,000 bushels corn. Of this immense business, this city has probably more than three-quarters. About one million barrels of flour will be received in Boston during this year, and two millions and one-half bushels of corn. Only seventy thousand barrels flour have been exported to all foreign countries from Boston since September 1st. Of the great quantity of breadstuffs landed there, but a small part is shipped away. Nearly all is sold for home consumption.

THE SYMMETRY OF THE SOLAR SYSTEM.

The following is part of an article, by SAMUEL E. COWES, formerly of Portsmouth, N. H. We copy it from the *National Intelligencer*, in which paper Mr. Cowes has published several articles recently, of a nature too abstruse, perhaps, to interest the general reader; suggesting new and startling views of the laws of motion of the heavenly bodies. Mr. Cowes is a self-educated man, and an original thinker. His reverence for antiquity is not, like that of some scholars, so profound as to obscure his own reason. The student of astronomy or natural philosophy will find in all the articles from the pen of this gentleman a vigor and freshness which does not usually belong to writers on these subjects.

All our readers will, we know, be pleased with what follows:

"All forms resemble, yet none is the same as another; and the whole of the living points to a deep hidden law—points to a sacred riddle."

What is symmetry? If we draw lines on a piece of paper, and before the ink is dry, fold the paper in the middle of the random scratches of the pen, the lines will be repeated on the opposite side, and a symmetrical figure is the result; because, however irregular and confused were the lines as at first made, each line has imprinted itself opposite, and there ensues a balance of parts which constitutes symmetry.

A symmetrical building has the same height, the same length, and the same finish and appendages on each side of the central line. The architect has repeated his work without a variation of plan; he has enlarged the edifice without a change of the constructive idea he formed. One part is wisely constructed, and the wisely constructed whole is a repetition of perfect parts. It is, therefore, congruity resulting from unity of design which gives the symmetry of structure.

In works of Nature this congruity and unity of design is exhibited in a most wonderful manner. We observe symmetry everywhere; as the Bible declares, "all things are double, one against another." The limbs of an animal are duplicates; its body on one side of the medial line is the counterpart of the body on the other side; one animal is the type of another of the same family. This congruity extends between families, races, classes, and orders of the animal kingdom. The animal fades away by an insensible gradation into the vegetable, and the vegetable into the mineral kingdom. Element also correspond to element, and this world itself to other worlds; one division

of the solar system to another group of the same system; and the great system itself corresponds to the other systems of spheres which revolve around the great centre of the universe. There is no break in the creation—no disjointed members—no isolation of parts. One style or general character subdues the most varying into the common expression. Creation is an extension of divine wisdom; the most minute part is perfect, and the general perfection is a repetition of these perfect parts. Symmetry is, then, the many signatures of the one archetypal seal; it is the participation of all things in the pervading and immutable wisdom of God.

The study of the symmetry of the solar system is the great work of the astronomer, and all his researches in this direction will bring to him a due reward. He can know of remote worlds because he knows of this world. He can estimate the magnitudes, distances, and periods of afar-off spheres, because there are magnitudes, distances, and periods which he can measure. He can appreciate the beauty and sublimity of the heavens, because he feels the beauty and sublimity of that part of creation which lies open to his eye.

Could our view embrace the solar system at one glance, were the full depths of space thrown open upon us in awful sublimity, re-echoing in our ears "all things are double one against another." But our view is limited; the glory of the heavens lies buried in the obscurity of distance. We must look around and about us, and comprehending the visible objects, ascend by toilsome steps from the minute to the grand—the unknown from the known, every day widening the horizon and enlarging the view,

Let us recall the symmetry of one simple wild flower of the myriads of such growing in the fields, forest, and on the mountain tops. The segments of its cup, of its petals, of its stamen, of its style, are regular, equal, and alike; every part of it has a corresponding part; even the tints and shades of color on one side are repeated on the other side. We could draw the flower reconstructing it from one of its smallest divisions.

Again, a leaf declares the form of the tree on which it grew. Its petiole or foot-stalk is an analogue of the trunk of the tree from the ground to the point of the offset of its first branches. The veins of the leaf, as they extend from the centre or the midrib vein, shoot out at the same angle as shoot out the branches from the stem of the tree; and the veins are whirled, reticulated, or otherwise distributed as are the branches.* A leaf thus gives a miniature drawing of its parent tree; it writes down in its tiny page the character of the great vegetable organization of which it is a minute appendage.

Compare the leaves of two strawberry plants, one being a red, the other a white berry; both leaves are of the same form, serrated alike, and of the same shade of green, but on the apex of the one leaf there will be found a *red* dot, while in the same position on the other leaf will be seen a *white* dot, as marks or indices of the color of the fruit.

Cuvier could reconstruct an animal from a small fragment of one of its bones, and teach of its habits and food, and generally of its character. The bit of bone under his eye grew to the perfect bone; the skeleton appeared re-clad with its flesh, and the muscle seemed to be covered with a skin, spotted and colored as when the animal a thousand years ago had made the forest to tremble beneath its cry. The character of the animal can be known because this character is written down on every limb, member, and part of its body.

They who seek to know of the harmony of the spheres have been ridiculed "as men of prurient imaginations." But something more than fancy is required. Stern science and laborious deductions are the only avenues to this knowledge. The footsteps of men like Cuvier must be followed. Knowing a part of the solar system, even one sphere—as a leaflet of the tree whose branches cover the heavens—knowing some one phase of the great law which binds together the brotherhood of worlds, it is possible for the mind of man to conceive, for him to see with the inner eye what instruments can never measure, what telescopes can never reveal—the solar system as a perfect symmetrical whole.

This world is wisely made, and the far-off Neptune is in symmetry with it. The position of the Moon relatively to the Earth was wisely determined; so the distance of the group of the sattellites of Neptune bears one and the same relation to its primary. As there is a known proportion between the periods and distances of the planets, so is there also a fixed proportion between their magnitudes and distances. One fact must be used to evolve other facts; and these again to make known some truth at a greater distance, until the solar system is reconstructed in the human mind.

"That which the human mind demands to know, what it resolves to attain it never fails to discover." Truth often lies nearer to us than we suppose. But is there any present attempt among the astronomers of the day to push the inquiry for new manifestations of the symmetry of the spheres!

Astronomers watch for the return of comets into the fields of the telescope. They discover new planets and asteroids; they compute the elements of orbits; they pass whole lives in mathematical abstrusities, buried up in wise drawn calculations of planetary perturbations. They find what they seek. Newton, in their opinion, has attained all the principles that can ever be attained. In their own language, "Newton seized the golden key which unlocks the mysteries of the universe and holds it in an iron grasp." Nothing is left for them to discover, no truth for them to evolve; and since the days of Newton not one general principle of physical astronomy, manifesting the simple majesty of the heavens, has been disclosed.

We have full faith that there is to be built up a philosophy of the heavens opening to the human mind a distinct view of the symmetry of this almost boundless creation of God; for this great system of worlds is but as one world, is as one creation, the limbs of the members of which, though stretched out in infinite space, are in harmony one with the other; their magnitudes and distances growing out of each other so directly that the magnitude and motion of the Sun, as the central body, being known, the magnitudes and motions of every revolving sphere to the most minute satellite of the farthest planet may be also obtained, the whole being the seamless vesture of the creative wisdom of God.

Astronomers have rested long enough on the triumphs of the Keplers and Newtons of former

ages. Honor to their memory! Let such never be mentioned but with heartfelt reverence! But there is work yet to be done: new truth yet to be attained. If the work is not done in the present age, if the further truth is not attained by the living, future ages and coming astronomers will not permit the science to remain as it was left by Newton two hundred years ago. Recall the words of Newton at the close of his Principia: "In the preceding books I have laid down principles not philosophical but mathematical; such, to wit, as you may build your reasoning upon in philosophical matters." He foresaw to what his mathematical system would lead; as the seer and prophet, a vision rose before him of the true philosophy of the heavens, of which his laborious and abstruse calculations were the scaffolding.

We reverence the Arys, Adams, and Le Verriers of Europe—the Pierces, Maurys, and Mitchels of our own country. Their minds are accute and their labors truly praiseworthy; their observations give a knowledge of the past, present, and future positions of the spheres, and are highly valuable. It is the extended eye-sight. Their abstruse calculations, too, are indispensable. They make the courses of the stars, otherwise invisible, to be as golden wires across the heavens.

But this is not all. There is another department in astronomical science for other purposes—purposes less worldly utilitarian, but far more valuable, and demanding the use of other faculties of the mind. We want not a science shut up in observatories, hidden from the common eye in the abstrusities of mathematics, and comprehended only by those who devote there whole lives to the study, but an astronomy that appeals to cultivated men and to intelligent women; an astronomy which will bring the human into connexion with the Divine, which will develope the creative power of man, that he may be in sympathy with the form and fashion of the universe; that he may be able to place his tiny footsteps in the track through which the creative power of God has passed.

There is a power in astronomy which has not been developed; there is a light in the science which is yet to cheer and brighten the common mind, to elevate it to the contemplation of the boundless power of the Creator of worlds; so that when men look up to the heavens, seeing there the almost infinite number of spheres dotted down on boundless space, when, in the stillness of the night, they behold worlds in number without end, each one filled with life, intelligence, and happiness, the thought may rush into their minds that this vast creative power has been and is now in action for beings like them; not only that they might eat and drink and die, but that, dwelling in the edifice of God, they may have the high and the exquisite joy of hearing from the stars of the glory of God, and of learning from them of the simple majesty of His handywork in the heavens.

S. E. C.

*This is stated in a paper read before the "British Association" as true of one hundred and ten species of trees which the author of the article had examined.

Depth of Roots.—Linus Cone, of Michigan, states in Moore's *New Yorker*, as the result of all his examinations, that he has invariably found the roots of grass, grain, vegetables, fruit and forest trees, occupying *all the soil*, no matter what was its depth. He has taken out stumps where the roots penetrated a hard clay more than eight feet, and has gathered wheat roots by the handful, in a drain more than three feet beneath the surface. He hence infers that the deeper the soil can be plowed, and rendered friable and fertile, the better.

CRYSTAL PALACE AWARDS.

The awards of the juries of the New York Crystal Palace have been published. Medals and "honorable mentions" appear to have been scattered with a very liberal hand. The whole number of silver medals is 115. Of bronze medals there are 1185, while 1210 exhibitors (or articles) receive the more simple distinction of an honorable mention. The greatest number of silver medals falls to the lot of the United States. The next country in rank is France, which has 15; while Great Britain has 9, Germany 5, and Switzerland, Austria and Italy one each. Of the bronze medals, the United States has 505, Great Britain 143, France 153, Germany 106, Prussia 30, Belgium 10, Switzerland 29, Holland 12, Austria 18, Italy and Sardinia 44, British Possessions 26.

Of the silver and bronze medals awarded, 115 were given to New England. Massachusetts takes 57 of these medals, and 42 "honorable mentions." The following is a list of the Massachusetts contributors to whom silver medals were awarded:

Ruggles, Nourse, Mason & Co., Boston and Worcester, Mass., for the scientific principles which have been practically perfected by Samuel A. Knox, their Artist, and adapted to the series of Sod and Stubble Plows, exhibited by them.

Adams, S. & J., Boston, for Standing Printing Press.

Ames, James T., Chicopee, for Eccles' Patent Gingham Looms.

Whipple, John A., for Crystalotypes, a new art.

The following is a list of the Massachusetts contributors of *agricultural implements*, to whom bronze medals were awarded:

Massachusetts Shovel Co., Worcester, Sumner Balcom, Agent, for Kimball's Patent Shovels, with malleable iron sockets.

Ruggles, Nourse, Mason & Co., Boston and Worcester, for Armsby's Patent Corn Sheller, and for the general assortment of Agricultural, Horticultural and Dairy Implements of their own manufacture.

Ames, Oliver & Sons, North Easton, for a case of heavy Shovels and Spades.

Partridge, Henry, Medfield, for a very superior collection of Potato Rakes and Manure Forks.

Ruggles, Nourse, Mason & Co., Boston and Worcester, for Perry's Patent Meat Cutter; for a Vegetable Cutter; for the Double Sod and Subsoil Plow, improved by the application of the principle discovered by Knox.

"Honorable mention" was awarded to the following citizens of this State, for agricultural implements, &c.:

Dennis, John H., Boston, for a Bee Hive.

Knox, Samuel A., Boston for his principle in the Mechanism of Plows, &c., and for a new Seed Drilling Machine.

Old Colony Iron Company, Taunton, for a beautiful

case of good looking Shovels and Spades of steel and yellow metal.

Phelps, E. W. & Co., Westfield, for premium Combination Bee Hive.

Rugg, Amos, Montague, for improved bent Hand Hay Rakes.

Ruggles, Nourse, Mason & Co., Boston and Worcester, for a neat chest with assortment of Horticultural Tools; for Sausage Fillers, in consideration of their superior mechanism; for a Horse Hoe, and for the superior workmanship of their Plows; also for Combination Pumps, Drawing Knives, &c.

EXTRACTS AND REPLIES.

POUDRETTE.

"I have heard something said about a kind of manure got up at New York city. I understand that it is the filth, night-manure, &c., &c., of the city, which is collected by a company, and manufactured somehow and sent off in barrels. It is said to be second to no other substance as a manure. Please tell me what you know of it, and its cost per barrel?"

REMARKS.—Poudrette is manufactured from the materials mentioned above, principally night-soil, however, and is sold in small quantities at $2,00 a barrel—something less for a number of barrels. It is a powerful fertilizer, and held in such esteem by the most intelligent cultivators, as to make a demand greater than the supply. If you address "*The Lodi Manufacturing Company, New York City,*" your order will reach the persons engaged in the sale of the article.

SOWING MEADOWS TO GRASS.

I am about ditching and clearing the moss, breaks, bushes, &c., from a tract of low, boggy meadow, and am spreading the mud that comes out of the ditches upon the surface. After it is finished, I should like to know what kind of grass seed I shall sow, or what would probably be the most suitable for such meadow?

West Hardwick, Jan., 1854. A SUBSCRIBER.

REMARKS.—As far as you go with your meadow, reclaim thoroughly, and you will find double the profit in it. Plow, if possible, but if not, bog deep, gather and burn the roots, hassocks, &c., scatter the ashes, level the whole and sow seed the same as for upland—herd's grass, red-top, and in the March following, a little clover seed. We mention these grasses because they are all good and hardy, and in our present state of knowledge of the grasses, the best, perhaps, we can use. But that there are other grasses of equal or greater value, we are strongly inclined to believe, and we greatly need some well authenticated tests of their relative merits. The grasses vary widely in the proportions of their nutritive properties, as well as other plants. In 100 grains of rye grass, there are 65 parts of mucilage or starch and 8 parts of sugar, the remainder being bitter and saline matter; in the meadow cat's-tail, or herd's grass, 74 parts starch, and 10 sugar; in white clover in flower, 77 parts starch and 2 sugar; in red clover in flower, 79 starch and 8 sugar; and in the meadow oat, 80 starch and 10 of sugar.

In what we have said, we take it for granted that you have drained properly—that is, have so far ascertained the wants of the land as not to take the water off too far from the surface on one hand, or suffering it to rise too high on the other. Draining, is by no means an operation of the hands alone; without the aid of science, it often proves detrimental, rather than a benefit.

HOW TO USE GUANO.

"If you will inform me how to apply guano the best to promote our common crops, you will confer a favor on myself, and I doubt not on many others beginning to use it."

REMARKS.—Pound it fine, mix with loam, moist sand or meadow muck, one part guano to four of the muck or loam. Mingle it thoroughly and apply as much as would make one gill of the guano to the hill. If you use it for the garden, steep it in water and sprinkle with the watering-pot. See *Monthly Farmer*, vol. 4, p. 214, and vol. 5, pp. 12, 25, 30, 100, 148, 155, 160 and 254.

CRUELTY TO HORSES.

The *Eastern Mail*, Waterville, Maine, has a capital article, on this subject, of which the following is a part:—

"Passing a blacksmith's shop, some time since, we stopped to admire a beautiful horse belonging to Mr. S., as it stood waiting for a set of shoes. No wonder that horse was a pet—and none but a bold man would dare abuse him in the presence of his owner. When the flies made him a little restive at the driving of the first nail, the smith flew into a passion, and dealt blow after blow with his hammer, with the fury of a madman. The owner did not know how that blood came upon his horse's nose, or those bunches upon his ribs—but we did.

It is doubtless a legal question—it is certainly a moral one—how far a man has a right to vent his fury upon a 'balky' or a vicious horse. We say fury, because nothing renders a passionate man so frantic as a contrary horse. We have seen a mere looker-on turn pale with anger; while the man with the whip would foam at the mouth like a rabid dog. To those who have not seen it, this is, beyond credit; to those who have, it is strange. For such men the law against cruelty to animals was provided; and upon all such it is the positive duty of the ministers of the law to see it executed."

☞ The GRANITE FARMER, Manchester, N. H., has been enlarged, united with the *Monthly Visitor*, and secured the services of LEVI BARTLETT, Esq., of Warner, as Associate Editor. Mr. B. is a good farmer, and vigorous writer, as all who have read his articles in the *Journal of Agriculture* well know. He understands *Chemistry* in its relations to agriculture better than most of us who are interested in the subject. We have no doubt his articles will give great additional value to the *Farmer*.

For the New England Farmer.

FARMING IN NEW ENGLAND—No. 2.

The great obstacles to the successful prosecution of agriculture in New England, are generally supposed to be our *hard soil and unfavorable climate.* But as these obstacles are triumphantly surmounted by many of our farmers, it proves that they can be by others; and that our *real* difficulties are more recondite and farther removed from the popular apprehension. Two or three of these will be specified, and one of them I believe to be the *moving, nomadic character* of our population. I do not know that the data can anywhere be found, which would show precisely *what proportion* of the farms in New England are now owned by the descendants of their earliest proprietors. From a somewhat extensive observation, and considerable reflection on the subject, I am satisfied that but a *small per centage* of our farms, are now in the hands of the families, which felled the forests which originally covered them. In very many cases they have been sold, and re-sold, and sold again, and their original proprietors and all their descendants have alike disappeared from among us. This spirit of restlessness, of dissatisfaction with our present condition, and desire to improve it by change, is attempted to be sanctified by calling it the *spirit of the age*, or *indomitable Yankee enterprise.* The rich prairies of the West, the "baseless fabric" of the golden visions of California, or a tempting clerkship of three hundred a year on Washington Street or Broadway, have exerted a most disastrous influence on everything like *permanence and progressive increase* in the farming operations of New England. In Great Britain, France, Flanders and Germany, where agriculture is carried to greater perfection than anywhere else, there exists among the owners of the soil, the strongest possible attachment to the freeholds, great or small, which they cultivate, and which their fathers for centuries cultivated before them.

This strong and laudable attachment to one's earliest home, the play-ground of his infancy, the scene of his youthful labors, the arbor of his wedded love, the nursery of his children, and the sepulchre of his fathers, which is native to every human heart, has long been violated by the migratory habits of New England: and this violation of so sacred a tie has inflicted an incalculable injury on the persevering industry and cumulative prosperity of our farmers. Mungo Park tells us how strong this natural love for the spot of one's birth is in the heart of the African negro; "To him no water is sweet but that which is drawn from his own well, and no shade refreshing but the tabba tree of his native dwelling. When carried into captivity, he never ceases to languish during his exile, seizes the first moment to escape, rebuilds with haste his fallen hut, and exults to see the smoke ascend again from his native village." In France, the same feeling is observed, and Arthur Young long ago remarked that it "continues undiminished in strength, though the freehold is reduced to *the fraction of a tree.*" Bishop Heber tells us that in Ceylon, the attachment of the cultivators to their little properties is such, that "it is not unusual to see a man the proprietor of *the hundred and fiftieth part of a single tree.*" In Canada, too, this local attachment among the *habitans* of French descent still operates with such force, that population multiplies *inward* not *outward*, and cultivators divide and subdivide their freeholds among their children, and cultivate them more and more highly from generation to generation.

Now, although this feeling has doubtless become excessive in older countries, and therefore fetters enterprise and compresses the range of the intellectual powers, it is quite certain that we have long been going off into the opposite extreme. With us almost every man is anxious to sell his farm, or cut it up into building lots. The papers are crowded with advertisements of "Farms for Sale;" many are sold which are never advertised, and many more would be, if purchasers could be found. It would seem from this popular movement as if there were about to be a general exodus of the farming population of New England—a stampede of almost the entire class to some fabled garden of Hesperides in Wisconsin, or some El Dorado in Australia. Multitudes are anxious to convert their farms into cash—*to realize*, as the phrase is; and after selling out their paternal acres and investing the proceeds in articles or projects of moonshine, of which there are always enough at hand, they, in the end, begin to *realize* that they are fools, and that they will be likely to die in the poor-house. Not a few of our farmers seem to be cousins to the "squatters" at the West, who cultivate farms only for the purpose of making some improvements, and of selling them to the first bidder, to dash into a wilderness still more Western, and try the experiment over again. Or, to use a more appropriate similitude, they rather resemble the wandering Arab, who settles down upon one oasis till he *exhausts* it, and then removes to another, to repeat the same impoverishing process. The Bedoweens of the desert are not very celebrated for agricultural thrift, and the Bedoweens of New England, with good reason, are not much more so.

Further views of the subject will soon follow.

Waltham, Feb., 1854. D. C.

For the New England Farmer.

WHEAT—45 BUSHELS PER ACRE.

Mr. Brown:—Knowing that facts are better than theory, to convince the understanding, I alluded, in a former communication to the *fact* of having raised about fifteen bushels of wheat on fifty-four square rods of ground, or at the rate of nearly forty-five bushels to the acre.

You ask me to give the details of my management. You shall have them, though they may not be so definite in some things as I should like—and here I would say, that it was not in 1853, but 51, that I raised the wheat alluded to. My usual mode is to break up the ground and manure and plant it two years; and then to seed down with wheat, barley or oats. When with wheat, I put on more or less ashes, and by this means I usually succeed in raising fair, and sometimes large crops of wheat.

The piece of ground on which I raised the fifteen bushels, was on a hill gently sloping south—soil deep and warm—plowed, and planted with potatoes the first year, with five loads of stable manure spread over it. The second year, plowed in five loads of unfermented manure, and put six of well rotted manure in the hill and planted with

corn. Crops heavy both years. The third year, plowed and sowed about three pecks of wheat the first week in May, plowed *deep* and *fine*. Fineness of pulverization I consider very essential to insure a good crop. Levelled the furrows with a light harrow, sowed and harrowed once each way. I do not like to run over my fields when I get them plowed up light and fine, with too many such things as harrows, brush, rollers, &c. So I take that which does the work best with the least trouble. When the wheat had got up two or three inches, I sowed on about six bushels of ashes just before a light shower. Harvested about the first week in September. My hired man, who was a Canadian, remarked to me when reaping it, that he had "*rept* a great deal of wheat in *Carnada*, but this was the *huwiest* he ever *seed*." And in fact it was the heaviest that I ever saw. The straw was not so tall or so large as I have seen a great many times. It was stiff, hard and small, so that it did not lodge at all, notwithstanding it was very thick and the heads so heavy. The wheat was very nice and plump. The amount might be a trifle more, or a trifle less than fifteen bushels; it was not measured very exact.

We have raised at the rate of between thirty and forty bushels to the acre before. The kind of wheat which I sowed is very superior, and is said to have been brought from the vicinity of Hudson's Bay; I know not with what truth. I think much of *fine pulverization*, and ashes, for growing wheat, in fact for growing any kind of crop. I have made quite a number of experiments with ashes, gypsum, lime, &c. The experiments generally turn in favor of ashes. J. T. W.

Marlboro', N. H.

For the New England Farmer.

BEE-CULTURE—No. 2.

It is evident to every experienced apiarian that bee-culture is carried on to a very limited extent in this country, compared with the facilities which are afforded for its most successful prosecution. As he looks abroad on our cultivated fields, upon our hills and valleys extending from Mexico to Canada, and from the Atlantic to the Pacific, something like a painful sensation comes over him as he is compelled to witness an entire loss of vast quantities of honey on every side, which, without injury to any one, might be gathered, if bees in sufficient numbers were set at work under a proper and well regulated system of bee-culture. Here he discovers a vast source of wealth, the smallest fractional part of which has scarcely been secured. This state of the case brings to his mind most forcibly the causes which operate to produce this result. These causes I shall denominate,

OBSTACLES TO BEE-CULTURE.

The first which I shall name is the *want of adequate knowledge* in reference to the peculiar habits and economy of the Honey Bee.

It is not at all surprising that very little should be known relative to the nature and operations of bees, when we consider the circumstances in which they have been placed, or the mode of culture which has been adopted. The bee-hive has been, to a great extent, a dark apartment. There are commendable exceptions to this, but they are few and far between. By far the great majority of hives now in use are as dark and as far removed from the inspection of the bee-keeper as the cave in which the hyena dwells. Travel in almost any direction and enumerate the hives which are thus dark, and at the same time mark those which are so constructed as to give the keeper even a tolerable view of the interior, and you will find the proportion of the latter compared with the former extremely small. In many instances those which pretend to give us a view of the interior are so ill adapted to this purpose as only to tantalize our earnest search after further light and knowledge. Add to this darkness of the hive another fact, viz.: that a majority of bee-keepers read very little and reflect less, and experiment less upon their bees, and you have a solution of this matter, or can understand why it is that such erroneous views are extensively prevalent, and absolute ignorance also where enlightened views ought to be entertained. I have often been surprised at the degree of ignorance which exists among persons who have been bee-keepers for years. Some of them know as little respecting their peculiar habits as if they had never kept them. In these circumstances a very serious obstacle exists to the adoption of any enlightened and successful system of bee-culture, and this obstacle is not to be removed except by an application to the appropriate remedy or remedies. Hives are to be differently constructed. Information is to be sought. Experiments are to be made. In other words, a different mode of bee-culture is to be adopted. Such a result can be anticipated only in connexion with adequate knowledge in reference to Beeology.

North Bridgewater.

For the New England Farmer.

MORE LIGHT WANTED.

MR. EDITOR:—I think much of your paper. I have in my care a few acres of good land, and wish to make it all produce at the best possible advantage. I wish for more light. What is the best mode for a poor man to pursue in regard to making his land produce the most with the least labor and expense? Please give information to one who beholds the light just beaming, what is the best mode of laying round cobble stones for fence? JOSIAH A. FRENCH.

North Clarendon, Vt.

REMARKS.—Here is a fine opportunity for some of our correspondents of experience to increase the "light just beaming" upon the endeavors of the inquirer.

For the New England Farmer.

OYSTER SHELL LIME.

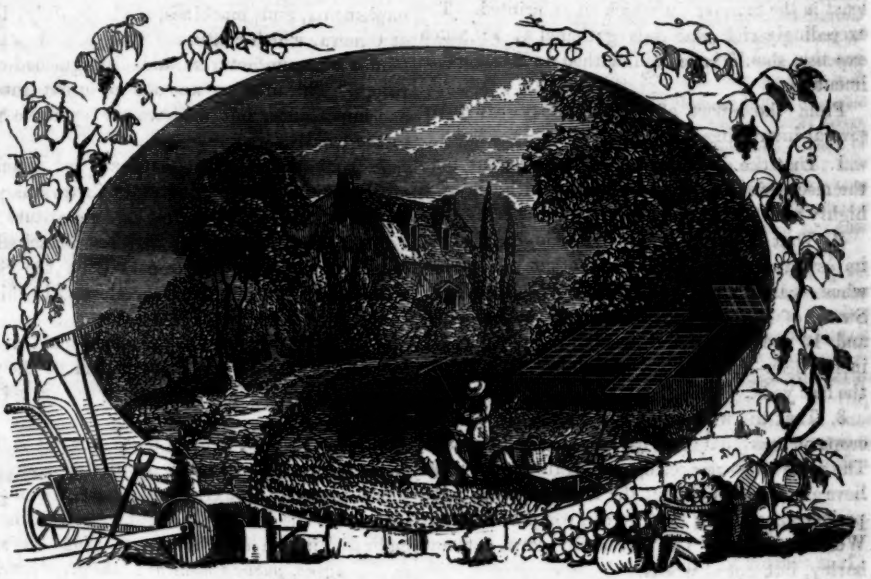
MR. EDITOR:—In your paper of Dec. 3d, the inquiry is made in relation to oyster shell lime as a cement. I have used it in laying the walls of more than twenty cellars, and have found that it answers very well. It sets equally as well as the stone lime, and I think it is, at least for this purpose, equal to the best—and as its cost is only about one third that of the stone lime, it is preferable. It will bear the addition of more sand. The proportions should be about 5 parts sand to one of lime. BENJ. PAGE, *Stone Mason.*

Charlestown, Jan., 1854.

GARDEN WORK.

We introduce the annexed engraving as an embellishment to these pages, (as it suggests many agreeable reflections) and as an incentive to prompt and vigorous preparations for the *Garden Work* which will soon call for your attention. With a plan of the garden spread out before you, it will be easy to decide where each bed, shrub, tree, flowers, roots, vines, &c., shall be placed, and when the whole are arranged on paper, if any change seems desirable, it will be much easier to make it there than by removing the plants themselves, or altering beds, borders and walks.

It is very important in gardening, even in the common kitchen garden, that the ground should be laid out in convenient form, and so remain from year to year. Straight lines will be found the



cheapest and easiest kept; but curved lines may be occasionally introduced, which will set off the appearance of the garden considerably, and without incurring much expense. A border, from five to ten feet wide round the whole, if the grounds are not very extensive, will be found very convenient. Next to this there should be a walk of liberal width and the centre divided into squares with such walks as will allow the whole to be reached without treading too much over the planted ground.

It is best that this order should be observed even in a garden of the humblest pretensions, as it will afford greater convenience for cultivation, will not call for new *engineering* every spring to say what shall be done in its various departments, and the same spaces may be planted with the same vegetables indefinitely, if it is desired, if the soil is annually enriched.

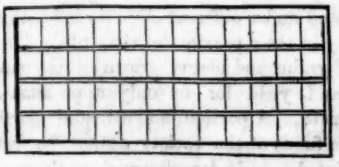


Fig. 2.

Sash Lights, Fig. 2, should be made of well seasoned wood about 1½ inches thick, the glass thick, about 7 by 12 inches, and lapped so as to shed the rain. Their form, and manner of placing them on the hot bed are pretty well represented in the large engraving above.

Fig. 3.

The Hand Glass, Fig. 3, is a glass case, with a pyramidal-shaped cover, and is used for forwarding early plants, or sheltering such as are taken from the hot-bed and set out in an open compartment.

Peruvian Guano.—The Peruvian Government Agent for the sale of *Guano* in Baltimore, has advanced the price $4 per ton, and has also given notice that in future no sales will be made in lots of less than fifty tons, so that the trade will now fall into the hands of commission merchants. The newspapers recommend that prompt action be taken by this government to reduce the price of this great agricultural fertilizer. Within the past winter several cargoes of the article have been lost

on the coast, and it is said the supply will not meet the demands of the farmers for spring consumption.

TRANSACTIONS OF THE N. Y. STATE AGRICULTURAL SOCIETY.

Through the politeness of the Secretary of this Society, B. P. JOHNSON, Esq., we have received a copy of its Transactions for the year 1852. It is a noble volume, and worthy of the Empire State. It has some faults, and among them, not the least is the manner in which it is printed. The exceedingly rich materials gathered at so much expense, should have been clothed in fairer habiliments.

From the report of the Secretary, we learn several interesting facts; and

1. That the general progress of agriculture and the mechanic arts connected therewith, is of a highly satisfactory character.

2. That increased attention is being paid to the important subject of draining—that one man—whose name ought to be recorded—ROBERT J. SWAN, of Fayette, Seneca Co., has laid 17 miles and 16 rods of covered drains, from 30 to 36 inches deep—all laid with draining tiles during the last year.

3. That the wheat crop has diminished, and the crops of corn, oats and barley largely increased. The same facts respecting the grain crop we believe are true throughout the Eastern States. Experience has shown that we can compete with the Western States in the produce of corn, oats and barley, but not of wheat.

4. That the products of the dairy have increased largely, viz., butter, 264,361 lbs., and cheese, 12,991,437 lbs. These results are truly surprising when it is remembered that the number of milch cows has diminished, since the last State census by the large figure of 68,066. These figures demonstrate that the character of the dairy animals has been very greatly improved.

5. That under the direction of the agricultural society, surveys of the several counties in the State, are being made—one or more yearly. During the year the survey of the county of Essex has been completed by WINSLOW C. WATSON, Esq. This county lies in the northeast portion of the State, borders on Lake Champlain, and includes Mount Maray and part of Adirondac. The county is found to be rich in mineral treasures, and especially in a mineral that is of immense value to agriculture, viz.: *phosphate of lime*—and this is said to exist to an extent "commensurate with the demand of the world." This article, we believe, was discovered in this locality about the same time that it was in New Jersey; 100 tons of superior quality had been sent to the seaboard in 1852. Providence is thus furnishing a supply of fertilizers, to meet the demand resulting from an increase of population. The agricultural survey of the several counties of a State like New York, containing so great diversity of soils, is one of immense importance to the prosperity of the State. Indeed, we cannot well see how its resources can be fully developed without it. It must demand great labor and much time, but we trust the liberality of the State will not fail until it is fully completed. It will be a lasting monument to the wisdom of the State.

6. That there was a trial of the various farm implements, and machines, made in July, 1852, at Geneva, which continued 8 days, and was attended by manufacturers and distinguished cultivators. This meeting was one of great interest and importance, but we have not space to refer to the results.

7. That the Society keeps an eye upon the movements that are taking place in various parts of the world, in the matter of agriculture, and exchanges its Transactions with the principal agricultural societies of Europe. Even the Sandwich Islands have not been overlooked in this respect.

8. That the amount of premiums paid at Utica was $7,500, and the amount paid at the winter exhibition of fat stock and seeds, was $1,800 more!

9. That the Fair held at Utica continued four days, and was of a highly gratifying character. The Address by HORATIO SEYMOUR, is one of great interest. The leading thought contained in it is embraced in one short sentence. *Like the steam in the engine, public sentiment is the great source of action.*

The volume contains several highly interesting and valuable reports, upon important subjects connected with agriculture. One upon breeding stock, and one upon curing and packing beef and pork, contain much information. But the one that most strongly arrested our attention, is the analysis, by Dr. J. H. SALISBURY, of several common vegetables, as the beet, carrot, melon, &c. We trust the Dr. will continue the good work which he has commenced, and give us analyses not only of the various roots, but of the grains, and especially of that most important of all plants in American husbandry, the *Indian corn*, not only of the grain, but of the whole plant. We have never seen a satisfactory analysis of this plant, made upon our own soil. We want American analyses of American plants. Every one who has attended to the subject, knows that plants grown in different soils and under different climatic influences differ widely in their proximate elements. The analyses of grains and plants grown in Germany and England yield for us only approximations to the truth. A portion, and a liberal portion too, of the funds of the society cannot be better appropiated than in securing such analyses.

The almost innumerable articles entered for premiums at the State Fair, is a striking feature in the New York exhibitions. The range is a wide one from Devon bulls and mowing machines, to bead purses and rat-traps. But then they have $9000 to distribute, a much larger sum than has any agricultural society in the Union, and they can embrace a long list of productions, and mechanical inventions and improvements.

In addition to the report of the State Society, the volume comprises an abstract of the reports of forty-five county societies, a work of immense labor, and one which demonstrates the industry and perseverance of the Secretary of the State Society. The volume closes with the Survey of Essex County, a document of great interest as well as great value.

This volume is one which the Society may send with pride to the various societies with which it is in correspondence, in Europe and in this country. It may be taken as an index of the march of improvement which the State is making, not only in agriculture but in all the arts of life.

LEGISLATIVE AGRICULTURAL SOCIETY.

ENTHUSIASM AMONGST FARMERS.

We copy the following well-considered and timely remarks from the *Connecticut Valley Farmer and Mechanic*, published at Springfield. Mr. CALHOUN, its able Editor, has attended many of these meetings, and can speak advisedly of their worth. We beg our readers, too, to ponder well what he says in regard to making the business of agriculture more of a study. A good plow never was designed without months, perhaps years, of close study, and to drain well a field is as scientific an operation as to contrive a good plow. Read, brothers, read; you who have not practised it cannot be aware of the power it will give you over the resisting soil.

"As the Legislature contains a large proportion of farmers, the Agricultural society has been reorganized to give them an opportunity to confer together, and to discuss, with the aid of such scientific gentlemen as may be induced to attend their meetings, matters that are of interest and value in the farmer's profession and pursuits.—There can be no doubt that these Legislative Agricultural meetings have been of great benefit.—Whatever crudities may occasionally be uttered, there has always been a substantial amount of good sense and practical experience, which have characterized their doings. A favorable effect on thinking minds is always discernable; for enough is said at every meeting to awaken thought and investigation.

These meetings have been kept up for a long series of years; and it would be an ill omen to the farmer if they should be discontinued. During the period of their existence, valuable improvements in the business of farming have been suggested, and many have been introduced to good advantage. These meetings afford an opportunity for mutual consultation, which ought not to be overlooked, and yet it is certainly true, that farmers have not availed themselves of such an opportunity to anything like the extent which might reasonably be supposed. It is not an easy thing to excite even a proper degree of enthusiasm amongst farmers. They are not easily moved, and we believe one great cause for this is, that they do not read agricultural books—do not make agriculture a study, largely enough to give an earnest impulse to their thoughts. They are apt to look at their pursuit simply in its practical aspects. This is the most important view to be taken of farming, it is true; but there are a great many elements in it which are not regarded in a just light, and this can only be done by reading and study. We are very sure there is nothing in the whole range of study so well calculated to interest the thoughtful and studious as the principles of agriculture. All science is made tributary; and the whole business of life is embodied in it.—Why should not then the farmer be enthusiastic? The time is coming when he *will* be, when he *must* be. Every where are to be found,—both in this country and in England, additional instances of the most true-spirited and chastened enthusiasm.

This feeling may be cherished by associations—such as the Legislative society we have spoken of; and by the various county societies, and the clubs which are beginning to find a firm foothold in very many of our best farming towns. But the true source of genuine enthusiasm, after all, is private study, to which we earnestly entreat our farmers—especially our young farmers, to give themselves diligently and systematically."

For the New England Farmer.

LEGISLATIVE FARMERS.

On looking over the remarks reported to have been made at the First Agricultural meeting, I endeavored to distinguish those made by gentlemen belonging to some branch of the present government of the State. The executive department were among the missing. The Senators were not there—and if anybody belonging to the House, said anything, I have not the pleasure of knowing them in that capacity. Perhaps as this was the *first meeting*, they might not feel quite prepared to display their knowledge, and perhaps as so many of the members of the *Board of Agriculture* were there, who are presumed, *ex officio*, to have some knowledge of the subject discussed; that the talking men of the Senate and the House, might hold back for this reason. I think it but fair, that these officials should have an opportunity to display their knowledge, at these meetings—and that the people should have an opportunity to learn what they do know. Men often acquire a reputation for wisdom, by keeping their mouths closed. There is a time for *speaking*, as well as for *silence*—and while these meetings are in session, is the time for those who know anything, to let it out—those who do not know, are wise in not presuming to speak.

X.

To CORRESPONDENTS.—Several valuable communications are on hand, which shall have respectful attention, in good time. We are under re-

newed obligations to correspondents, and would say that when communications are delayed, (as they sometimes are for months) it is usually for one of two reasons; either that they are, miller fashion, waiting their turn, or are postponed to a season when they will be more applicable and have more force.

CULTIVATION OF ROOTS.

Mr. Editor:—Though much has been said and much more written on the importance of the culture of the various root crops to the farmers of New England, yet, but very few, comparatively, of the great mass of the farming community, have, to any considerable extent, practically tested their value. Too many are contented with the same old routine of farm crops, and the mode of their culture adopted by their fathers who have gone before them,—or possess too little enterprise and energy to attempt improvement. Ours is a day of progress, as well in relation to the produce of the farmer, as it is of the manufactory of the hundreds of new and useful fabrics and implements that are turned out from the factories and workshops. I know many farmers will give you the stereotyped answer to all your suggestions of improvement: "My father did so and so, and was considered a good farmer;" "I don't know about all your new-fangled ideas about farming; I believe I am about as safe to keep on in the old path." Well, I know our fathers adopted many practices of industry and economy that their sons would do well to copy, but because that is true, I do not wish to return to the use of the old wooden plow, or to the old wood shovel, lined with some five pounds of iron. I do not wish to go back to the old well-curb, in a cold, January morning, eight or ten rods from the house, because our fathers had not discovered the lead aqueduct and the hydraulic ram. I have often heard my venerable grandfather say, that some seventy-five or eighty years since, a farmer living in Westminster, raised twenty-five bushels of potatoes, and the crop was considered so extravagant, that it made a "town talk;" but now some farmers raise nearly as many hundreds, and sell them all at a great profit. I know one neighborhood (I think all in one school district) where, a few years since, nine farmers raised on their own farms, fourteen thousand bushels of potatoes for the Boston market.

But to the culture of the carrot. Three topics seem to suggest themselves; their culture, their use and their profit. Soil should be selected that has been cultivated the year previous with corn, potatoes, or some other crop that has thoroughly pulverized the soil. Some have sown upon the ground just after turning the green sward. That is a mistake, as the unrotted sward prevents the root from penetrating a sufficient depth. The crop, everything else being the same, will not equal two-thirds as much as if sown upon pulverized soil cultivated the year previous with some other crop. The soil should be well manured.—Put from twenty to twenty-five cart loads of well rotted manure upon the acre. It should be plowed, ten inches in depth, as early as the season will allow, taking care to spread the manure as even as may be before plowing. The soil should be well plowed twice, and thoroughly harrowed before sowing. The land should be good, friable, soil, not necessarily rich, as experience has taught me that as many can be raised on deep, sandy loam, as on "rich bottom land." The top of the land should be thoroughly pulverized with the head of an iron-tooth or wooden rake. The seed should be sown with a machine (if you have twelve square rods, as it will save expense) as soon as from the 20th to the 25th of May, if the season and soil will allow. The drills should be from fourteen to seventeen inches wide. They should be wed with a hoe some three times; the first should occur as soon as the young plants can be seen in the drills, if the ground is at all inclined to weeds, as a "stitch in time will save nine."

The use of the carrot, as of course, its culture, has, till within a few years, been very limited. It was used almost exclusively for culinary purposes, as no farmer then dreamed of feeding them to animals. Of course, half a square rod sown in the garden would produce an abundant supply for a large family. Now, many farmers in Worcester county, raise from one-eighth of an acre to an acre or more, and feed them to all kind of neat stock, horses and swine. They are the best of any of the root crops that I have ever tried, (though I have not cultivated the beet, which is, undoubtedly, very valuable), especially, for breeding cows and swine, as they require more liquid than animals that are fallow or fattening. I think they are worth more for swine, bushel for bushel, than potatoes. They possess less of the starch and more of the saccharine. The latter is the most nutritious, though I do not now recollect the comparison by a chemical analysis. For a number of years past, I have kept my swine almost exclusively on carrots through the winter season, and never had them do better.

Now for the profit. That is the Yankee's test of the propriety of almost everything. The expense of land, rent, manure, culture and gathering, as presented by the competitors in the Fitchburg Agricultural and Industrial Association, ranged from ten to fifteen dollars per eighth of an acre. That or more was the amount required for premiums. The average produce was about 112 to 115 bushels. I raised on 43 square rods (219¼) two hundred and nineteen and a half bushels, or about eight hundred bushels to the acre. I recently sold 30 bushels, 57 pounds to the bushel, for 33 cents per bushel, which I considered very low. Now for the clean profits. The expense per acre is about $96, and the carrots, at 33 cents per bushel only, amount to $264, leaving a net profit on a single acre of land to equal, if not exceeding, the annual value of the aggregate farms in New England.

The fact is, we have begun to develop the capabilities of the earth to produce food for man and beast. I do not doubt the abilities of the soil of our country alone to produce an abundance for all the wants of five hundred human millions of beings—more than half of the present population of the globe, and I believe an all-wise and benificent Father will yet thus people this green carpeted earth, not only on this continent, but on every rood of soil of the globe. But I must stop. Let me just say, however, that if I can find some leisure evening, and shall not be regarded as an intruder upon the time of yourself or readers, I would like to say a few words upon another branch

of farming, far more important to the happiness and profit of New England farmers than the one we have been considering. I mean fruit raising.

JOSHUA T. EVERETT.

Everettville, Westminster, Jan. 15, 1853.

Fitchburg Sentinel.

FARMERS IN PUBLIC PLACES.

The press has been burdened of late years with lectures and sermons and satires, addressed to agriculturists, reprobating the fact that, on public occasions, as cattle-shows, &c., when speeches are to be made, they fall into the rear, and speak only by proxy. Facts are as stated. We have a word to say as to their propriety.

We remember that Lord Mansfield is reported to have said that he should be as much ashamed to know statute law as not to know common law. The reason is obvious. Statutes are constantly changing, and not one in a hundred is ever called to the notice of a lawyer. Hence, to study them so as thoroughly to understand them in all their relations, would be time thrown away, and labor without profit.

It is so, in our opinion, with the entire catalogue of working-men. If any one has the "gift" of public speaking without study, or experience, or science, we know not why he may not *show it up*. For the sake of the bar and the pulpit, and for their clients' and hearers' sake, we wish this faculty did "come by nature." But we are persuaded that it is not thus that men are eloquent, or persuasive, or instructive. Such qualities are only the result of much reading, of careful and close study, and no little experience. Hence, if farmers do make speeches, the presumption is, that the result will be about as happy as if a lawyer were to undertake some of the most difficult and intricate of farmer's work, or a clergyman were to undertake to play mechanic.

True, we have some lawyers and some doctors, and some men of leisure, who enrol themselves on the list of farmers. Some are educated at college, or other equally useful institutions, so as to make them conversant with language and science; and thus, and *thus only*, are competent to acquit themselves handsomely in public speaking.

But not one half the lawyers, nor one-half the minister, nor one half the doctors, can make a good speech at a dinner-table, or at a public anniversary. Our Benevolent Societies, annually meeting in New York and Boston, are obliged to use over their old stock, and that, too, several times within our own recollection, and even then fail to sustain the interest with which they first began. This is a matter of notoriety. Under such circumstances, to laugh at farmers for not exposing themselves as volunteer bores, is far from being judicious or in good taste.

The farmer who toils all day, and at night makes plans for to-morrow, how can he be expected to become a good and acceptable speaker? If he has acquired the art before he becomes a farmer, or the mechanic before he becomes a working mechanic, it is all well. We wish many, *a multitude*, might thus qualify themselves before they commence these arduous pursuits.

Besides, our farmers are proverbially modest men. Different causes conspire to make them so. We should regret a change, and nothing would so thoroughly effect this change as frequent public debate. We have known a few absolutely ruined by this very process. They "outgrew their shoes." They substantially outgrew their dresses and their entire habits, and, like some of old, did nothing but hear or *tell* some new, and yet thrice told story.

We commend these considerations to our agricultural friends, and to the press. It is not necessary to be a good public speaker in order to be a MAN. At the same time, some of our most fluent "orators" are, and are regarded as, very small men, while those who are always speaking in public are always laughed at. Of this, the last, we never knew an exception.—*Plough, Loom and Anvil.*

AGRICULTURAL STATISTICS.

In the October number of this journal, on page 315, in a notice of the value of domestic animals in the United States, as shown by the last census, it is stated that "Vermont stands highest on the list of the Northern States; the estimated value of her live stock was $12, 643,228. That of Massachusetts was $9,647,710."

So far is Vermont from "standing highest on the list of Northern States" in the value of live stock, that she possesses only *one-sixth* as much as the State of New York. The latter returned $73, 570,499; while the six New England States returned only $42,400,222.

New York has about seventy per cent. more capital invested in live stock than either Ohio or Pennsylvania. If any one is curious to learn in what part of the United States may be found 500, 000 acres of improved land in a body that yield the greatest value per acre, he will find them not close to any of the Atlantic cities from Boston to New Orleans, not in New England, Ohio, nor in any of the rich farming districts at the West or South, but in Western New York, and mainly in the valley of the Genesee. To make a farm produce its maximum in money, is itself a profound study. The farmers of Monroe county have this day over $800,000 invested in farm implements and labor-saving machines. They are just beginning to view the art and science of production in their true light. D. LEE.

—*Southern Cultivator.*

FINE CORN CROP.

Mr. GEORGE W. WINSLOW, of Epping, N. H. tells us below how he raised about 114 bushels of corn to the acre.

"This field of corn was remarked, by good practical farmers, to be the evenest lot of equal size, (one acre and 113 rods), ever seen. Few if any hills were missing on the field; and three ears only, were seldom found on a hill: on most of the hills were four and five ears, and on many there were six, seven and eight; making five ears, I think, a low estimate for the average. The hills were three feet apart each way, giving 4,840 hills to the acre, which multiplied by 5, the number of ears on a hill, giving 24,200 ears on an acre. I have ascertained by shelling and counting that 212 ears only, are required for a bushel of shelled corn. Now divide the number of ears on an acre, (24,200) by 212, the number required for a bushel, and it gives 114 bushels and about 6 quarts to the acre.

—*Exeter News-Letter.*

KINGS OF THE SOIL.

Black sin may nestle below a crest,
And crime below a crown;
As good hearts beat 'neath a fustian vest,
As under a silken gown.
Shall tales be told of the chiefs who sold
Their sinews to crush and kill,
And never a word be sung or heard
Of the men who reap and till?
I bow in thanks to the sturdy throng
Who greet the young morn with toil;
And the burden I give my earnest song
Shall be this—The Kings of the Soil!
Then sing for the Kings who have no crown,
But the blue sky o'er their head;—
Never Sultan or Dey had such power as they,
To withhold or to offer bread!

Proud ships may hold both silver and gold,
The wealth of a distant strand;
But ships would rot, and be valued not,
Were there none to till the land.
The wildest heath and the wildest brake
Are rich as the richest fleet,
For they gladden the wild birds when they wake,
And give them food to eat.
And with willing hand, and spade, and plow,
The gladdening hour shall come,
When that which is called the "waste land" now
Shall ring with the "Harvest Home."
Then sing for the Kings who have no crown
But the blue sky o'er their head;—
Neither Sultan or Dey had such power as they
To withhold or to offer bread.

I value him whose foot can tread
By the corn his hand has sown;
When he hears the stir of the yellow reed,
It is *more* than music's tone.
There are prophet-sounds that stir the grain,
When its golden stalks shoot up;
Voices that tell how a world of men
Shall daily dine and sup.
Then shame! oh, shame on the miser creed
Which holds back praise or pay
From the men whose hands make rich the land—
For who earn it more than they?
Then sing for the Kings who have no crown
But the blue sky o'er their head;
Never Sultan or Dey had such power as they,
To withhold or to offer bread.

The poet hath gladden'd with song the past,
And still sweetly he striketh the string,
But a brighter light on him is cast
Who can plow as well as sing.
The wand of Burns had a double power
To soften the common heart,
Since with harp and spade, in a double trade,
He shared a common part.
Rome lavished fame on the yeoman's name
Who banished her deep distress;
But had he ne'er quitted the field or plow,
His mission had scarce been less.
Then sing for the Kings who are mission'd all
To a toil that is rife with good;—
Never Sultan or Dey had such power as they,
To withhold or to offer food. UNKNOWN.

SMOKELESS CHIMNEYS, AND SAVING THE PRODUCTS OF COMBUSTION.—Major Browne, of London, has recently patented an apparatus for preventing the egress of smoke from the tops of chimneys. The invention is applicable to old chimney shafts, or in the construction of new ones the top of the chimney is closed in, and at about halfway up in those of present construction an opening is made in the side as large as the structure will allow. Outside this an iron box is firmly secured, in which is a foliated revolving cylinder, its axis placed horizontally, having a grooved pully grooved to the motive power by which it is set in motion. The leaves of this cylinder are curved downwards in the direction of its rotation, to facilitate collecting and carrying downwards the solid particles of carbon, and the denser vapors into a tank beneath containing water, and in which it partially revolves. This tank has two openings, one to insert fresh water, the other to withdraw collected matters. When the smoke reaches the opening it comes within the immediate action of the draught by the rapid revolution of the vanes, and is quickly condensed in the cold water trough.

For the New England Farmer.

THE CURCULIO.

FRIEND BROWN:—Many plans have been proposed, at various times, by numerous individuals, to thwart the destructive operations of this enemy to the plum, or rather to those who love that delicious and very desirable fruit.

But that which has been effectual with others has proved a failure with me.

A late number of the *Farmer* contained several specifics, but none of them can hardly be ranked as "something new under the sun."

I have salted and resalted the trees, or rather the ground under them; I have thrown air-slacked lime among the branches and blossoms, and that repeatedly, but the failure has been entire, the destruction has been complete.

I would even undertake to dislodge some of the nits, slow and tedious as the operation confessedly is, either by sunshine or moonlight, could I be thus sure of a few handfuls of delicious plums. But I do not despair, for the rogue must quit or run the risk of being taken at a pinch. And yet he is, evidently, rather a shy fellow, for the first one that I ever saw was last summer; passing under a tree one morning, I discovered him perched on a plum, and if he did not leave his mark on the age, he certainly did on the green gage.

Burrillville, R. I., 2d Mo. 1st, 1854. J. S.

COMPOUND INTEREST.—Some of the natives of Africa, although they may have little pretensions to a knowledge of mathematics in general, seem to have a very clear and comprehensive idea of the principles of compound interest. This appears from the facts stated in a report of a select committee at a British post, on the customs of a tribe in the vicinity. According to this report, if one native stole a fowl from another, the owner, if he had witnesses of the facts, would suffer the matter to rest for two or three years. He would then institute an action for damages, which are measured by this curious standard: It was in the first place calculated how many eggs these fowls would probably have laid in the course of one or two years—how many of these would have been hatched, how many of these chickens would themselves have become parents, for the period of time between the commission of the robbery and the conviction of the offender. For this imaginary wrong, damages have been given to the fullest extent, and husbands and wives, and whole families, sold to requite the owner of the fowls for his loss. —*Boston Journal.*

For the New England Farmer.

THE "WITCH HAZEL."

Mr. Editor:—I would inquire of you, as a man of science and a person of experience, what dependence can be placed in the dipping of the Witch Hazel for determining water courses; or, in short, whether this so called "water philosophy" amounts to anything more, after all, than a simple deception? It has long been believed by many that the Witch Hazel, properly held, will veritably indicate the courses of living water in the earth. And I call attention more particularly to this matter, since I find this belief authenticated in a late Patent Office Report, in an article on "Well Digging," (p. 14) where the matter is described as an electrical phenomenon. Yours, H. H. H.

Remarks.—We have searched the books in vain for some account of the theory that the "Witch Hazel" will dip, or incline to the ground, when held over subterranean water courses, or deposits of the precious metals. The idea is an old one, as we find it alluded to in some of the English books, but can find no account of its origin. A gentleman whose well-balanced mind is rarely disturbed by theories that are not sustained, at least, by *some* sound reasons, once told us that in company with about twenty other persons, he made experiments with the Witch Hazel. A crotched bush about three feet long, was cut, and a branch of the crotch held in each hand, the stick being held in a perpendicular position. A stream was flowing near by, but entirely covered, and on approaching it the hazel gradually inclined towards the water in repeated instances in the hands of five or six individuals of the party. He then, with another person, held the hands of him who carried the hazel, so that he could not bend or depress it in any way without his knowledge, and the result was the same, the rod saluted the ground! While in his own hands the rod did not change. After these experiments the rod was tried in the same manner in other places, but without its inclining to the earth. Such is his relation; we can add nothing that would add interest to it, or throw light upon the subject.

Ship Timber.—Over three hundred oak trees, it is said, have recently been disposed of in Oakham, Mass., to ship builders from Maine, to constitute the frame of one ship. Some of the trees brought $15 each on the stump. Mr. McKay, the builder of the Republic, lately burned in New York city, and brother of the commander of the same, is here from East Boston, exploring the timber lands of the farmers, and purchasing all the white oak that he can, for ship building, which he carries on at East Boston. He pays the farmers, we have been informed, $12 per thousand, board measure, after the timber is hewn. A large quantity has been drawn to the depot, soon to be sent to its place of destination. Several car loads have already been forwarded from Belchertown. Mr. McKay, we understand, is procuring this timber to build another ship like the Republic. The timber thus demanded is becoming scarce, and is consequently very valuable. We hope that those who own such timber will not part with it, without a full equivalent. One farmer in this town, we understand, has sold three hundred trees, and several others, each a less number.—*Amherst Express.*

AN UNKNOWN RIVER.

A lieutenant of the French ship Armand has published in the *Revue Coloniale* a notice of the River Volta, one of the great rivers of Western Africa, north of the equator, and the source of which is in the mountains of King, not far from the sources of the two great affluents of the Niger. The notice is transferred to the *Courrier des Etats Unis*, from which we translate as follows:

Upon the two banks of the Volta may be seen an infinity of small villages densely peopled, especially upon the immediate shores. Fishing seems to be the sole employment of this numerous people. The beaches are covered with flakes for drying the fish previous to sending it into the interior, where it constitutes the principal food of the inhabitants. The river is deep and navigable to a very great extent.

The King, whose name is Aquananoo, is sole chief of this vast country, of which Adda is the capital. The population of this city, as far as can be judged from a cursory view, is about 2500. It possesses an organized army, of which the commander-in-chief is Toffoo.

The cessation of trade has reduced this people to great poverty. Accustomed to subsist upon the profits of trade, they have never cultivated the earth any farther than was required by their absolute necessities. Upon either bank of the river are vast forests of palm trees, from which the people might derive a magnificent product. Either from idleness, indifference, or the want of means of transportation, however, there appears to be but one individual in the whole country who has undertaken the manufacture of palm oil—and he without success.

The small quantity of oil produced is transported to Occo, a town upon the border of the sea, about eight miles west of the Volta. The expenses of transportation and shipment absorb so much of the proceeds of the sale of this commodity that no encouragement is afforded for engaging in the manufacture.

The "oldest inhabitant" of this singular country does not remember ever to have seen a vessel in the Volta, deep and navigable as it is.—*Traveller.*

For the New England Farmer.

GREAT CROP OF SUGAR.

I shall take the liberty to boast a little of a maple tree only two feet three inches in diameter, standing on my farm in Rensselaer county, from which I made thirty-three pounds of sugar last spring.

In Hoosick township, as it hath appeared,
There is a maple tree, from which you've heard;
Which in one spring produced of sugar three and thirty pounds,
Now beat this if you can, within the Bay State's bounds.

Elihu Cross.

Hoosick, Rens. Co., N. Y.

FOURTH AGRICULTURAL MEETING,

AT THE STATE HOUSE, TUESDAY EVENING, FEB. 8.

The meeting was called to order at 20 minutes past 7 o'clock, by Mr. FLINT, Secretary of the Board of Agriculture, and Hon. SETH SPRAGUE, of Duxbury, was invited to preside.

Dr. REYNOLDS, of Concord, was then introduced, and delivered an elaborate essay on Vegetable Chemistry. One of the great features brought out by an investigation of the laws of the vegetable world, said the lecturer, is their uniformity of production and chemical activity. There is no deviation from the pattern of the parent stock, without the intervention of art. The leaves of plants collect all the materials necessary to sustain life and produce fruit, the principal agent being carbonic acid. Water and ammonia are also decomposed in the leaves, and oxygen, hydrogen and nitrogen are thus obtained for nutriment. The great object of the cultivator should be to adapt the plant to the soil, and the soil to the plant. Each kind of plant furnishes its best manure in its own decomposition—that is, the decomposition of a vegetable, forms the best manure for that species of plants; as, for instance, decayed potato tops are the best manure for that esculent.

At the conclusion of Dr. REYNOLDS' address, Mr. Sprague announced the topic for the evening's discussion, viz:

Plows and Plowing—taking into view the form of the plow, the time and the manner of using it, and all incidents connected therewith.

Mr. SPRAGUE called upon Mr. HOWARD, of the *Cultivator*, to open the discussion.

Mr. HOWARD responded, and said he thought farmers were too apt to generalize from single facts. People speak of a plow of a particular form as meeting their uses best. He thought no arbitrary rule could be laid down for the pattern of such tools, because different crops and different kinds of land require different kinds of plowing—the same plow will not answer in all cases. Take a heavy, dense soil, it may need much pulverizing, while a light soil would be injured if the same system were pursued with it, because its carbonaceous properties, which nourish the plant, are dissolved and evaporated by exposing its texture too much to the action of the atmosphere. Consolidation is as important in some cases as pulverization in another, and plows should be selected with reference to this fact.

As to the depth of plowing, he noticed the same tendency to generalize from isolated cases. He was in favor of deep plowing and of shallow plowing,—but each in certain cases. The land and the crop must be taken into consideration. Some soils contain vegetable ingredients to a great depth; he knew of some in New York State which were as rich at seven feet below, as at the surface, and of course cannot be plowed too deep. In New England the soils present a great contrast to this, and in his opinion extended experiments could alone settle the question of deep and shallow plowing. He suggested that our agricultural societies, and the Board of Agriculture also, should institute these experiments, by choosing committees to go into the county and select different fields to be plowed differently and with different plows, the results to be carefully compared, and an annual report made thereof.

Mr. KNOX, of Worcester county, a plow maker, was next called on to continue the discussion. He remarked that he had been engaged four or five years in manufacturing plows, and had experimented a good deal with them. There should be different plows for different kinds of soil, and the plow should be adapted to the depth of furrow desired. On sandy land a concave plow, with a series of longitudinally inclined plates, should be used, and the ground plowed quite deep. For clayey land a long convex plow should be used, which will give ease of motion and leave the furrow, so that in passing the air will readily escape. The Michigan subsoil plow is an improvement over the old fashioned kinds in the saving of labor, some farmers say to the amount of three to five dollars to the acre, because it leaves the ground very light; yet there is one disadvantage about them. In plowing deep they leave a dead ridge, this may be avoided by using the swivel plow. Another kind, the subsoil plow, used on mowing and pastures, works excellently, turning the ground over. The amount of grass cut from land treated in this way has been known to exceed by one-third that cut from adjoining land treated in the ordinary way.

Mr. STANLEY, from New Hampshire, thought it a good plan to turn up a little of the sterile soil each year, until 12 or 15 inches of good soil is obtained if desired. It is less trouble and expense than some imagine. His method is to plow around a piece, in order to avoid deep furrows; after taking off the grass, put in grain, and then begin where he left off before. This method kept the land free from ridges, and level. He approved of condensing light soils and loosening heavy soils.

Mr. SPRAGUE remarked that it was the opinion of Mr. Allen, of Pembroke, whom Mr. Webster called a model farmer, that plowed fields are injured by too much exposure in summer to the hot sun. Stirring the soil frequently tends to let off certain qualities which are necessary for the growth of plants. There is an idea prevalent among farmers that the soil cannot be stirred too much. He had known a large quantity of corn, which obtained a premium, to be raised on a sandy soil without hoeing at all; but the weeds were kept out of it.

Mr. Howard said the effects of stirring the soil differed, according to its composition. Soils should be stirred for two purposes—to permit the roots of the plant to penetrate it, and to accelerate the action of its nutritive qualities. He would stir all kinds of soil sufficiently to destroy the weeds. If he had corn on sandy land, he would stir the ground only enough to kill the weeds.

Dr. Reynolds believed it to be a well ascertained fact that stirring soils enabled them to absorb moisture. If corn curls up in dry weather, go through it with a cultivator, and it will be found that the leaves will unroll. If the season be dry, more corn will be obtained by hoeing it three or four times.

Mr. Knox related the particulars of an experiment in plowing which came under his notice. In 1852, Thos. J Fields, of Northfield, plowed three sections of a lot of land each a different depth, viz: 7 inches, 10 inches, and 10 inches with subsoil of 10 inches following, making 20 inches. He manured it all alike, and planted with corn, and obtained from the subsoil lot one-quarter more than from the 7 inch lot, and one eighth more than on the 10 inch lot. In 1853, he planted the whole with oats, plowing as before. The 7 inch lot, owing to the drought, produced a sickly, yellow looking crop, the 10 inch lot one rather better, and the subsoil lot produced a crop exceedingly thrifty and exhuberant.

For the New England Farmer.

QUACKERY IN FARMING.

Messrs. Editors:—Quackery is defined as the "boastful pretensions, or mean practice, of an ignoramus, more particularly in the practice of medicine;" but I shall take the liberty to add a little to the dictionary definition of quackery, which I think has not comprehended and described all the characteristics of that truly conspicuous class of citizens called quacks. A quack, whether learned or unlearned, is a shrewd, selfish, designing, money-loving, flattering impostor, who has no regard for the truth, when his end can be better accomplished by lying; Proteus-like, he will assume the character of doctor, chemist, lawyer, clergyman, pedlar, politician, or any other character where there is a chance to gratify his unholy propensity at deception, and in filching money from unsuspecting and credulous people. Quack doctors have been notorious for their impositions and intrusive interference among the sick, since the annals of medicine, but quack chemists must have been of more modern origin, and at what period their change from the chrysalis form took place, we have no chronology to inform us. Quackery in any profession, is founded on dishonesty; no honest man will intentionally, ever be a quack. Farmers ought not to be included in that list of characters which make "boastful pretensions" to the disparagement of one of the most honorable callings instituted by the Almighty, but we have reason to fear "in a few cases," in order to "keep up with the times," the "compass has varied" a *leetle*. Farmers have been noted for their open, communicative, undisguised honesty as a class of citizens, without secret fertilizers, or any other useful secrets, but what they took pleasure in communicating to their neighbors. Whether from ignorance or design a spurious article, designated by the name "patent" or otherwise, is imposed upon the farmer as a fertilizer, the act has the appearance of quackery, and shews a disposition to get money without rendering an equivalent.

A knowledge of chemistry has long been considered a necessary branch of a medical education, but its application to farming appears to have been of more recent date. From the days of Paracelsus to the present time, disputes have been kept alive between the chemists and Galenists, about the efficacy and safety of mineral medicines; now it is a matter of as much importance to the farmer, to continue the inquiry and ascertain the efficacy and value of mineral manures, as it is to physicians to know the value and use of minerals as medicines. We do not expect perfection in the professors of any art or science, for it is well known that the "best miss it sometimes," but we have reason to look for honesty in those who profess to be instructors in all the useful arts, sciences and respectable professions. The idea is held up by *some*, that a fortune cannot be made without the practice of deception and humbuggery, but a *gentleman* cuts rather a sorry figure on being detected in such acts of meanness, and his *friends* are not unmindful of the *favors* of that sort shown them, in their confidence manifested towards him afterward. Self-styled doctors and traders have been noted for quackery and deception, probably, ever since sickness and exchange of commodities entered the world, but such ones, like Cain, have a mark set upon them, that people may know them; high-minded men never let themselves down to the practice of such miserable, mountebanking operations of deception. I believe in one instance of a man's making his fortune by cheating, that two make their misfortunes, besides wearing tarnished characters, which would prevent carrying upright heads where there is a common degree of sensibility. But in conclusion of the whole matter, if the noble art of chemistry must be prostituted and made a vile instrument of imposture in the hands of designing men, one petition in the farmer's prayers ought to be, from quack chemists "Good Lord deliver us."

S. Brown.

Wilmington, Dec., 1853.

For the New England Farmer.

PEAS AND TURNIPS.

Mr. Editor:—I have a few rods of ground that I plant to peas before my other operations can well be performed upon the garden in the spring. When first out of the ground I bush them, and they grow so fast that they choke the weeds pretty thoroughly. Being the largest marrowfats, they are not fit for market until July 4 to 15, when they pay well. I immediately clear the ground, plow, and in August sow turnips in drills, having applied the guano before harrowing for the turnips. This crop is more benefited by hoeing than the peas. Where 35 bushels of peas grew last season, 100 bushels of turnips were obtained.

B. H. Franklin.

Worcester, Feb., 1854.

CHEMISTRY OF PLANTS.

All substances, whether vegetable or animal, are composed mainly of four elements, viz.:—carbon, hydrogen, oxygen and nitrogen. These, by uniting in different ways, make up the vast variety of organic in nature. They are held together by the attraction they possess for each other, and are set free the moment this attraction is overcome, to form new compounds or to escape into the air. Every perfect seed contains within itself the rudiments of a new plant, and in some varieties so perfectly developed as to be discernable with a microscope, root, stem and leaves all complete. But wrapt up in the seed, the embryo awaits the action of external agents, being entirely at their disposal.

The embryo during the first stage of its growth derives its nourishment from the seed. In some seeds, that which immediately surrounds it, is insoluble in water, and therefore cannot afford any nourishment to the miniature plant until a change takes place. To obviate this difficulty, the seed when exposed to moisture and air, at a proper temperature, absorbs water and oxygen, chemical action begins, carbonic acid is given off, and new substance is formed, which possesses the power of changing starch to sugar when it is dissolved by the water, absorbed by the seed, and taken up as food by the growing germ, which transforms and appropriates substances to its own use, but as yet possesses no power to organize them. But as the young shoot appears above the ground it begins to act for itself. The principal chemical changes now take place in the leaf. They are the true lungs of the plant, "it being at once an organ of exhalation, digestion and respiration, corresponding to the skin, stomach and lungs of animals." The mineral elements of the earth, taken up by the roots and carried into the leaf by the circulating sap, are there united with gases that have been imbibed from the air to form food for the growing plant, or in other words become a part of it. Different substances are taken up by different plants, but the process is substantially the same, whether carried on in the humble blade of grass or in the mighty oak that has stood for centuries. The process of absorption by the roots and leaves goes on in the daytime with great rapidity. Hales found that a sunflower weighing three pounds exhaled from its leaves thirty ounces of water in a day. Evaporation takes place chiefly from the under side of the leaf, it being covered with little pores, varying in size in different plants, "in the apple leaf amounting to 24,000 to the square inch." [Gray.] They have a valve-like action, regulating evaporation, contracting when a small amount of moisture is supplied, and opening when it is large. Carbonic acid is also absorbed by the leaf, and there decomposed, the oxygen being thrown back into the air, while the carbon furnishes the solid elements of wood and enters largely into all compounds formed in the vegetable kingdom. Plants also possess the power of decomposing water and ammonia, by which process hydrogen, nitrogen and oxygen are produced, which together with the mineral matters, taken up by the roots, and circulated in the sap, furnish all the materials required by the plant.

The animal and vegetable world are intimately connected. The animal world is constantly pouring forth carbonic acid from its system, at every breath, "a man exhaling about 140 gallons per day," [Davy] which until changed is poisonous to the animal world. Plants, as has already been stated, absorb carbonic acid, decompose it, retain the carbon, and exhale the oxygen again into the air. Thus the action of one is balanced by the action of the other, substances being constantly changing places and assuming new forms. What one does, the other undoes. Animals vitiate the air and plants cleanse it. But of what benefit is this knowledge to agriculture? It shows the necessity of fine, deep pulverization of the soil, that it may receive and retain the enriching gases, contained in the air. All nourishment is taken up by the plant in a liquid state, and therefore the more thoroughly the soil is pulverized, and the more intimately manure is mixed with it, the greater the benefit derived therefrom. It shows us too the necessity of preserving and converting all vegetable substances; for no farmer, however great a crop he may produce, creates anything, but only uses means to bring together in a new organization, matter that was created when the world was made.—S. Tenney, *in the Farmer and Mechanic.*

For the New England Farmer.

TO MEASURE CORN IN THE CRIB.

Mr. Editor:—There appeared in the *N. E. Farmer* of January 14. 1854, a rule to measure corn in the ear in a crib, to ascertain how much it will make when shelled. Suppose a crib to be 8 ft. long, 4 ft. wide and 4ft. high, then according to the rule 8x4x4=128x4½=57.6 bu. Now suppose we try another rule; take a crib of the same dimensions 8x4x4=128 solid or cubic feet, then 128x1728 the number of inches in a foot= 221,184÷2150.4 the number of inches in a bushel,=102.9 the number of bushels in the crib, cob and all. It is called very good corn up here in New Hampshire, that two bushels of ears will make one of corn, notwithstanding we raise some tall corn: then 102.9÷2=51.45 bushels; difference 6.15 bushels. Is the first rule referred to so correct as to be relied on? If so, please state the why and wherefore. A Subscriber.

Nottingham, Jan. 16, 1854.

For the New England Farmer.

WHY DON'T THE BUTTER COME?

Mr. Editor:—I wish to inquire of you, or through your paper, what is the reason that my cream will not make butter. I have one of Crowell's thermometer churns, and my wife and girl sometimes churn all day, and then I take my turn in the evening, and churn until nine or ten o'clock; we then lay it over for the next day, and churn until we get tired and out of patience, and then give it up. We have had three or four trials like this, and finally concluded it not best to try any more. I salt my cows once or twice a week, and am very regular about feeding them; the milk is kept in the cellar under the house, as I have no convenient place up stairs; it is a dry, warm cellar. We churn once a week. Now if you, or any of your subscribers, can tell me how to get the butter, you will much oblige me.

Joseph H. Welles.

Columbus, Ohio, Jan. 30, 1854.

FIFTH AGRICULTURAL MEETING,

At the State House, Tuesday Evening, Feb. 14.

Subject—Manures, the preparation and application thereof, including improved fertilizers.

The meeting was called to order at 7½ o'clock by Mr. Simon Brown, of the *Farmer*, who invited His Honor Lieut. Governor Plunkett to take the chair for the evening.

Mr. Plunkett, on assuming the chair, briefly addressed the audience, remarking that he felt convinced that there were others present, who, both from observation and experience, were better qualified to discuss agricultural matters than himself, for his occupation in life had not been that of farming. While we look around on the manufacturing and commercial interests of the State, and remark how greatly they contribute to its prosperity, we cannot help observing that there is one pursuit which underlies, and perhaps eclipses them both in point of importance—that of agriculture. Much of the comfort and luxury of the people of the Commonwealth is derived from this pursuit, hard and barren though our soil may be. And although these different interests are thought sometimes to conflict, he conceived no reason why it need be so—each can be made to help the other. If there ever was a time when all the faculties, industry, skill and enterprise of the farmer should be exerted, the present is that time. A great market is opened for our surplus agricultural productions, and high prices rule for them all; he was glad to see that the farmers of this Commonwealth are ready to reap a portion of the wealth which is thus offered to them. In passing over the State, we see less broken windows and fewer ragged children than formerly. We see handsomely painted houses, and fences, and every indication of thrift in the agricultural portion of the community.

One interesting and cheering sign of the times, is the higher view which is taken of agricultural labors. The inhabitants of our cities, the merchants and professional men, have come to look upon labor on the soil as an honorable pursuit, and he trusted the time was not far distant when farming would take rank with the most honorable professions.

Mr. Plunkett called on Mr. Proctor, of Danvers, to open the discussion on the subject for the evening.

Mr. Proctor remarked that he had had but little practical experience in the subject of manures, yet he considered the preparation and application of them as at the foundation of all success in farming, particularly on the sterile soil of New England. On farms which have become partly exhausted, it is indispensably necessary that the land should be renewed by manure. The question is, how shall we obtain this manure? Those who are the most successful in finding out and inventing manures are the most successful in raising crops. Much has been said, of late, of condensed manure, such as guano, phosphate of lime, &c., which have been used by some farmers, though with different results—sometimes proving beneficial, as often entirely lost. This is owing to a lack of accurate knowledge in regard to using them. Our farmers have not sufficient information to use them generally with success. That is what is needed. Yet they cannot be relied on to fertilize our farms. Common farmers cannot afford to buy them. The ordinary farmer should find on his own farm all the manure that he needs, for unless he can do this, he cannot farm successfully. Rich men may do it, but ordinary farmers cannot.

If farmers understood the constituents of the soil, they might accomplish much more in the way of fertilizing their land. If they knew what *composed the soil*, they would know what it needed to render it productive. On sandy lands, he had known clay to be applied with great success. A gentleman in Franklin county, who took a farm of forty acres, said to have been completely run out, yielding very small crops, began by applying about fifty loads of clay, in conjunction with plaster and manure. The clay was found to be just the thing for retaining the manure in the ground, whereas before the manure seemed to pass off, the clay grasped and held it. The crops were vastly improved, and the gentleman realized a nett profit over all expenses, of $30 to the acre, and received a premium from the agricultural society for his superior farming. Farmers can find on their farms all the manure that is needed to recruit them. On most farms there are spots of swampy land, the mud from which should be taken out and mixed with the barn-yard manure; and instead of having only 50 or 60 loads, the farmer may have 200 loads of good manure. Mr. Proctor mentioned a small farm on which, during the last eight years, 500 loads (of 35 bushels each) of manure had been made in this manner, and although the land was originally of very ordinary quality, its fertility had been greatly increased and excellent crops were obtained from it. He also related an instance where a neighbor of his, wishing to surpass his brother farmers in raising a crop of grass last year, obtained guano and applied it to his land, although he was obliged to do so at hap-hazard, knowing nothing about applying it properly. The consequence was, that when the time came to mow, there was nothing to mow! Another man, with an acre and a half of land, applied a compost of muck from the meadow, sowed his land with grass seed, and in thirteen months time cut from it 7,140 lbs. of good English hay, making a clear profit of about $60 over all expenses.

Mr. Brown, of the *New England Farmer*, said

he was more familiar with the physical operation of the preparation and application of manures, than speaking of them in public,—but being called upon, would make a few practical suggestions. He would first, however, advert to some of the theories which had prevailed in other countries and at different times. There was a time when distinguished men believed that manures were not necessary in order to raise fine crops. Jethro Tull, who wrote much in favor of this theory, succeeded in raising fine crops for several successive years on the same land without manure, but it was probably owing to the land possessing in abundance the peculiar properties which the crop required; but he lived long enough to perceive the fallacy of his favorite views. This theory has been revived of late, with some modifications which a better knowledge of the principles of chemistry could hardly fail to suggest, and consists in this—that if the soil is deeply and finely pulverized, it will be in the best condition to receive, just what the plant most requires, a full and free supply of nitrogen from the atmosphere.

Mr. Brown alluded to the great waste of fertilizing matters by the farmers of the commonwealth, and gave it as his belief that if the merchant were as careless in husbanding his resources, he would scarcely maintain himself for a single year. He thought farmers must rely upon their own lands for their fertilizing materials, and not upon foreign resources. Special manures, such as guano, the phosphates, poudrettes, lime, plaster, &c., are excellent as auxiliaries, and will often help out a specific plan or purpose both with convenience and profit. But *first, every means offered by the farm itself, should be improved in the highest possible degree.* Originally, most lands were fertile, the hills as well as the lower lands, but the action of the elements had disintegrated the rocks and the surface of the hills which had been washed into the valleys below, where common sense tells us we should go for the deposits there made.

The farmer should have a good barn, with a tight cellar under it, and his cattle kept tied up over night through the year; behind them should be a trench to catch the droppings, and if the trench is daily supplied with a covering of meadow muck to the depth of an inch, so much the better; from the trench the whole should pass into the cellar. Here, also, more muck should be added, covering the droppings an inch every morning. The importance of this system will be well illustrated by omitting this covering for a day or two, when an odor will be thrown off from the manure which will penetrate and infect the clothing or whatever comes in contact with it, but ceases on the droppings being again covered. This effluvium is the ammonia, which is exceedingly volatile and passes rapidly to the air, but is absorbed and retained by the meadow mud, thus preserving the chief fertilizing property of the manure. The droppings should also be kept where the frost cannot affect them, and overhauled occasionally during the winter. If he intended to plant corn, more especially if on sward land, he would spread manure, no matter how coarse, if well saturated, in the fall, and plow it in. This plan had succeeded admirably, and he compared it to a pan of dough, in which the yeast had been placed at night, and in the morning it was light and spongy. With land thus prepared, he could drive the plow in up to the beam in the following spring; and from land thus treated, said he had raised at the rate of 1200 bushels of parsnips and carrots to the acre. If he plowed sward land in the spring, would postpone it until the day before he wished to plant the corn, in order that there might be as much grass turned under as possible, which would become warm, ferment, and afford a fine resource for sustaining the later growth of the crop. Some of our best farmers are also in the practice of spreading the manure on the surface and plowing it under, even in the spring, and with excellent results. He would recommend that a little manure should be added to the hill in order to give the germ a quick and early start. This is a point where guano, properly mingled with swamp muck, may be used with advantage.

Mr. Brown favored the use of muck, also, and of coarse manures plowed under in the fall, because they impart *bulk*, as well as nutrition, which he considerad quite important, and enforced by some illustrations.

Mr. Howard, of the *Cultivator*, expressed, his concurrence in the remarks of Mr Brown, especially in regard to swamp muck and *bulky* manures. One reason why bulky manures are valuable, is, because they render some soils more friable. Another reason is the carbonic acid they contain, a fact which is too generally overlooked, even by scientific men. Vegetables feed largely on carbonic acid; it forms 90-100 of all vegetables, and a large portion of animals. The plant absorbs this acid as well by its roots, as by its leaves, and he thought that applying muck manure to the roots was better than depending on the atmosphere. Referring to the theory of Mr. Tull, of non-manuring, Mr. Howard said he thought that individuals erred in supposing that the results he obtained on particular soils, could be made universal. We know that much land in this country has a great depth of soil, and is of apparent inexhaustible fertility, and on such a soil the system might work, but no general good results could be obtained from the system.

Mr. Copeland, of Roxbury, thought sufficient prominence had not been given to artificial manures, particularly urates. If we analyze urine, we find that it contains ammonia, phosphates and

salts in greater amount, weight for weight, than solid manures. He had tried artificial manures extensively, and induced others to do so, with different results, according as applied. If put on the land previous to long continued rains, the benefit was very great; if applied after copious rains, scarcely any benefit resulted. The reason is, that plants cannot take up the matter necessary for their nourishment except in solution. One advantage of this sort of manure is, a greater amount of ammonia, and greater stimulative power. The speaker thought farmers had given way too much to chemists. They should study for themselves, and thus learn what they have to pay for without understanding, and which is merely temporary or of little benefit—as, for instance, a chemist may analyze the farmer's land, and furnish him with an artificial manure, for all which he must pay handsomely, but the chemist will not tell him how the manure is made, and he must buy more if he wishes to repeat the application. Besides, if the farmer understands these matters, he will enjoy the advantage of practical and not theoretical judgment; and will also be able to calculate the cost of such preparations as he may want for his soils. He will find this information in the works of the late Mr. Teschemacher, which are published at a cheap rate, and also in other works.

In New England many farmers cultivate too much land; they do not have time to become acquainted with the differences of soil which it often embraces, and therefore cannot find out what it needs. Some farms have no muck; but we must not look too much to bulk,—it is the elements which the plant needs. If you have a manure heap, put on to that heap a certain portion of sulphuric acid; it will unite with and retain all those gases which fly off, and which embody the qualities needed to promote vegetation. You will not have so many loads, but will have more in value. A mistake is often made by putting on these concentrated manures as thickly as bulky ones. The value of straw on land is not so great as the special manures which may be purchased with it. Straw is chiefly carbon and silica, with some salts; and the land does not need so much of the two former as the straw contains. If farmers would read, they would understand these chemical combinations.

Mr. Holmes enforced the necessity of considering the barn-yard as the great resource of the farmer for fertilizing agents. He regarded it a very injudicious plan for farmers to buy special manures, and allow the most valuable part of their home-made to evaporate into the atmosphere. Vegetable and animal matters decompose into carbonic acid, water and ammonia, which must be retained. Ammonia is valuable, and whenever the manure heap becomes heated, it throws off the ammonia, and it is lost. Nature has provided us with the substances necessary to absorb it. Carbon, in the shape of peat mud, and gypsum, or lime, another, which should be spread over the heap. The ammonia, as the manure in the country is now managed, is in a great measure lost. In the excrements of cattle are mineral substances which are required by plants. Put something over manure heaps which will retain its good qualities but not retard decomposition.

Mr. Russell, of Pittsfield, said he made considerable compost manures, using muck, loam or anything which comes handy. He also secured the washings from the sink, and collected all the droppings of cattle he could find, but did not cover his manures, and did not think it made much difference. He raised excellent crops with it.

Mr. Proctor said he was glad to hear liquid manures advocated. Last year a farmer whom he knew stalled his cattle (10 cows and 6 horses) at night, and preserved all the liquor by conveying it into a tank, from which it was raised by a pump for distribution over his land. Adjoining his barn was a field of 10 acres of grass land, which did not bear but a ton and a half of grass per acre. Last year he applied the liquid to it, and cut three tons of hay per acre, or double its previous yield. Every farmer can do the same thing, or what is equally well, use muck to absorb the liquid. He knew of farmers who had made great quantities of manure in this way. Further remarks were also made by Messrs, Smith of Hadley, Cook of Lenox, and Russell of Pittsfield.

Mr. Copeland stated that the most remarkable illustration of the value of liquid manure would be found in Belgium, which, from a sterile sand, had been converted into the garden of Europe, by the system pursued by the peasants. The land is cut up into small livings, and by means of the liquids collected from the household and perhaps from a single cow, surprising fertility has been imparted to the soil. Cows are often hired out at the rate of $20 per year for their liquid alone; this fact could be established.

A H[illegible]NTO Farmers.—Mr. Sanders, the American Co[illegible]ul at London, in a letter published in the *New* [illegible] *Herald*, says:

"Fi[illegible]ally, our farmers should sow plenty of spring wheat, and plant any quantity of Indian corn. The Baltic and Black seas will certainly be closed for at least a twelve month. England and Western and Southern continental Europe will have to look to the United States alone for a supply of breadstuffs, hitherto obtained from those seas."

Our farmers will do well to act upon this suggestion. There will undoubtedly be a demand for all the surplus breadstuffs we can raise, perhaps for several years to come, and farming will be one of the safest and most profitable branches of industry.

For the New England Farmer.

THE BIRDS OF NEW ENGLAND,

THEIR PAST AND PRESENT HISTORY....NO. 9.

BY S. P. FOWLER.

"Among the delights of spring, how is it possible to forget the birds. The smaller birds—the little songsters of the woods, and those that haunt man's dwellings, and claim human friendship by building their nests under the sheltering eaves, or among the orchard trees—these require a touch more delicate, and a gentler heart than mine, to do them justice." If Nathaniel Hawthorne, one of our most gifted and popular writers, could thus express a distrust of his powers to do justice to our birds, how can we hope to succeed in the attempt! But, if by any remarks upon their habits, we should induce the agriculturist to afford them protection, our object will be accomplished. The first bird we shall notice is the Blue-bird, one of our earliest spring visitors. It very much resembles in its character and appearance, the Robin Redbreast of England. It has a mild and peaceful disposition, which, coupled with its early appearance in spring, and its domestic habits, render it a general favorite. It feeds upon insects in the early part of the season, and in autumn adds to its bill of fare, berries and wild fruits. It is supposed to inhabit nearly the whole continent of America. Doct. Richardson says, the cheerful and familiar Blue-bird is one of the earliest arrivals in spring, on the shores of Bear Lake River, arriving in company with the well known American Robin. Mr. Wilson says, such are the mild and pleasing manners of the Blue-bird, and so universally is he esteemed, that I have often regretted that no pastoral muse has yet arisen in this western, woody world, to do justice to his name, and endear him to us still more by the tenderness of verse, as has been done to his representative in Britain, the Robin Red-breast. A small acknowledgment of this kind I have to offer, which the reader, I hope, will excuse as a tribute to rural innocence."

"When winter's cold tempests and snows are no more,
Green meadows and brown furrowed fields reappearing,
The fishermen hauling their shad to the shore,
And cloud-cleaving Geese to the lakes are a-steering;
When first the lone butterfly flits on the wing,
When red glow the maples, so fresh and so pleasing,—
O then comes the Blue-bird, the herald of spring!
And hails with his warblings the charms of the season.

Then loud-piping frogs make the marshes to ring;
Then warm glows the sunshine, and fine is the weather;
The blue woodland flowers just beginning to spring,
The spicewood and sassafras budding together:
O then to your gardens, ye housewives, repair,
Your walks border up, sow and plant at your leisure;
The Blue-bird will chant from his box such an air,
That all your hard toils will seem truly a pleasure.

He flits through the orchard, he visits each tree,
The red-flowering peach, and the apple's sweet blossoms;
He snaps up destroyers wherever they be,
And seizes the catiffs that lurk in their bosoms;
He drags the vile grub from the corn it devours,
The worms from the webs, where they riot and welter.
His song and his services freely are ours,
And all that he asks is—in summer a shelter.

The plowman is pleased when he gleans in his train,
Now searching the furrows, now mounting to cheer him;
The gardener delights in his sweet, simple strain,
And leans on his spade to survey and to hear him;
The slow, lingering school-boys forget they'll be chid,
While gazing intent as he warbles before them,
In mantle of sky-blue, and bosom so red,
That each little loiterer seems to adore him.

When all the gay scenes of the summer are o'er,
And autumn slow enters, so silent and sallow,
And millions of warblers, that charm'd us before,
Have fled in the train of the sun-seeking swallow,
The Blue-bird, forsaken, yet true to his home,
Still lingers, and looks for a milder to-morrow,
Till, forced by the horrors of winter to roam,
He sings his adieu 'n a lone note of sorrow."

The next bird we shall notice is the Rice-bird or Bobolink. This bird is well known, and possesses some peculiar characteristics, among which, we may notice the change of plumage in the male. Their beautiful nuptial dress is worn by them only during the love season, at the close of which, it gradually assimulates to that of the female, which is a brownish yellow, when by the first of August, they cannot be distinguished from their mates. The subject of change, in the parti-colored plumage of the male Bobolink, has long been a wonder to many persons. Mr. Catesby, one of our earliest onithologists, was greatly perplexed upon this subject, and upon examining great numbers of these birds in autumn by dissection, declared all of them to be females! What probably increased his perplexity was the fact, observed by him, that of all the great numbers of the pie-bald birds emigrating north in the spring, not a female could be found amongst them, and on the other hand, when they returned to the south in autumn, not a male could be seen, they having, to all appearance, become females. The true cause of this mystery, the change of plumage in the male birds, was first suspected by Mr. William Bartram, as noticed by him in his travels in North America, published in London in 1792, page 295. Like many of our birds, the male Bobolinks are first seen unaccompanied by the females, and by their lively and vigorous notes attract our notice, but the more quiet females, in their brown dress, and keeping much of their time on the ground, are but little noticed. We know of no change of plumage so great as that of the Bobolink, to be found in any other of our birds. We may also notice a great change, which takes place in their notes in autumn. The jingling, pleasing melody, which so often greets us from so many grassy meadows and fields, during the breeding season of the Bobolink, is hushed and silent in August, and nothing is then to be heard, but a clink, no way to be distinguished from the note of the female. Mr. Nuttall, who has distinguished himself among ornithologists, in his endeavors to imitate the notes of our songsters, says that many of the tones of the Bobolink are very agreeable, but they are delivered with such rapidity, that the ear can scarcely seperate them. The general effect, however, like all the simple efforts of nature, is good, and when several are enchanting forth in the same meadow, the concert is very cheerful, though monotonous, and somewhat quaint. Among the few phrases that can be distinguished, the liquid sound of *Bob-o-lee*, or *Bob-o'link*, *Bob-o'link'e*, is very distinct. To give an idea of the variable extent of song, and even an imitation, in some measure, of the chromatic period and air of this familiar and rather favorite resident, the boys of this part of New England make him spout among others, the following ludicrous dunning phrase, as he rises and hovers on the wing near his mate: "Bob-o 'link, Bob-o'link, Tom Denny, Tom Denny. Come

pay me the two and sixpence you've owed me more than a year and a half ago!—'tshe 'tshe, 'tshe 'tsh 'tsh 'tshe," modestly diving down at the same instant into the grass, as if to avoid altercation. However puerile this odd phrase may appear, it is quite amusing to find how near it approaches to the time and expression of the notes, when pronounced in a hurried manner." These birds devour various kinds of insects and worms, during the spring and summer months, and in autumn they subsist principally on seeds and wild rice. The Bobolinks are said, by Mr. Wilson, to be troublesome in the grain fields at the south, and in the oat fields of New England. But they have never, to our knowledge, been a subject of complaint in the eastern part of Massachusetts, and are generally regarded with favor by cultivators, as they undoubtedly should be. The last bird we shall notice in this communication is the Cat-bird, the Surdus felivox. This bird is not found in so great abundance in the eastern part of Massachusetts, as in the middle States. With us it is occasionally seen in swamps and thickets, feeding upon insects and wild fruits. It is well known to every idle schoolboy in the Commonwealth, that is sufficiently large to rob its nest, which he seldom fails to do, upon every opportunity; the poor unfortunate songster, having a bad name, is with boys a proscribed bird. Catesby, writing many years since, speaking of the Cat-bird, says, "They have but one note, which resembles the mewing of a cat." This, observes Mr. Bartram, is a mistake, very injurious to the fame of that bird, he, in reality, being one of our most eminent songsters, little inferior to the Mocking Bird; and in some instances perhaps exceeds it, particularly as a buffoon or mimic. They are a kind of domestic bird, during their spring and summer residence in Pennsylvania, building their nests in gardens, and sheltering themselves in groves near the houses. They cause great trouble and vexation to hens, that have broods of chickens, by imitating their distressing cries, in which they seem to enjoy much delight, and cause some amusement to persons who are diverted at such incidents. They are the first bird heard singing in the morning, even before break of day." With those persons who are above prejudices, the Cat-bird will be found, upon better acquaintance, to be an interesting songster, when in good humor. And even when displeased and petulant, its strange note, not unlike the mewing of a cat, cannot fail to be interesting from its quaintness. They are domestic and familiar in their habits, and can be induced to build their nests and rear their young in our gardens, provided a suitable shelter is made of shrubs and vines, where they can hide and conceal themselves. When thus furnished with a retreat, they have been known sometimes to build in our city gardens, where they could not fail to add to its interest by their musical powers. We are not certain, however, that the Cat-bird would not be tempted to partake of the fruit in the garden, but the mischief, which a pair or two of these birds would produce, could not be very great.

Danversport, Dec. 12, 1853. S. P. F.

Careful Use of Horses.—An acquaintance lost his horse a few days ago, in a manner that would suggest an habitual caution in driving. The horse, a valuable one, well kept, in good spirits, and in perfect health, was taken from the stable and driven. He had ascended a long and hard hill within the first mile of driving, and as soon as the summit was reached, the driver, as is the habit of many, touched him with the whip; he sprang, stopped, staggered and fell, and by the time the driver could alight from the carriage, he was dead. An examination showed that a large blood vessel near the heart had been ruptured.—*Farmer and Planter.*

For the New England Farmer.

FEED FOR STOCK.

Mr. Editor:—In your January number you speak of the disadvantages of dry food wholly, for stock, a fact of which I have been quite sensible for many years. Stock fed wholly on dry fodder, suffer from costiveness, and if the feed be poor, usually leave their leanto in the spring hide-bound and lousy, from which they hardly recover before midsummer; then the dry season comes on, consequently the milch kine report but indifferently at the pail, and the farmer complains that there is no profit in the dairy business, or in raising stock; nor is it uncommon to lose a horned quadruped when so wintered. To avoid some of these disadvantages, I several years since commenced the practice of feeding roots once or twice a week to my stock. For two or three years past, I have produced two or three hundred bushels of flat and Sweedish turnips, each year, and fed my milch cows with them daily. At first I cut them with a shovel, but did not like it, the labor being too much and badly done. I then purchased a vegetable cutter, of Ruggles, Nourse & Mason's manufacture, with eighteen knives, which is described in their catalogue.

It cuts into fine pieces and does perfect work; the only objection to it being, that it does not feed well without tending. If the manufacturers will construct the hopper so that roots will not clog, they will make it much more valuable. It will cut a bushel in a minute.

It would be superfluous to speak of the disadvantages of feeding corn stover uncut, did nineteen-twentieths of the farmers do it. We well understand that cattle, unless kept on short allowance, will eat but little more than the leaves and husks, and very many of us know how pleasant it is, when forking the manure, to be slapped in the face with a good sized corn "bumpin."

Last winter I for the first time cut my corn fodder and poorest hay for my cows. This, I considered quite an advantage, but there would be a portion each day of the more unsavory part they would refuse. I have thought favorably of the practice of steaming food for cattle, but could not seem to see how I could well do it in the barn, or contiguous to it, without undue exposure to fire. As an approximation to it in effect, I had a box made water tight, which holds about five barrels. After the last feeding at night, I put one peck of shorts on the bottom; then fill it about half full with cut corn stover, hay or straw, or a mixture of all—then put one peck of cobbage (corn ground in the ear) and half a bushel turnips which have been passed through the vegetable cutter—then fill the box topping out with another peck of shorts and another half bushel turnips; I then boil ten pails of water in my chaldron and pour upon it and shut the cover. This is the feed for five cows the fol-

lowing day. They are very fond of it, thrive well on it and leave a clean manger. With a single exception they are good beef. They give as much milk as they would on good June feed. I think I shall save about one-fourth my usual winter's feed. I am assured it will be objected that there is too much work in this. I think, Mr. Editor, I can do the extra work in this arrangement, while my neighbor on the one hand is smoking his half dozen short sixes, or the one on the other is hearing and retailing the neighborhood news at the public house. Yours &c., David Alden.

Southboro', Feb., 1854.

Remarks.—We are much obliged to our correspondent for the above account of his practice in feeding stock. We see no sort of objection to it, but on the contrary believe that, after paying interest and wear and tear of fixture, the cost of fuel for boiling the water, and the extra labor, you will save more than sufficient fodder to pay expenses, to say nothing of the greater quantity of milk you will be likely to get, and the better condition in which you will keep the stock.

HOW TO SUBDUE A VICIOUS HORSE.

On looking over some old papers the other day, we came across the following, which, if true, is worth knowing. It seems that a fruitless effort was being made in a blacksmith shop to shoe a vicious horse, which resisted all efforts, kicking aside every thing but an anvil, and came near killing himself against that, when by mere accident, an officer returned from Mexico was passing, and being made acquainted with the difficulty, applied a complete remedy by the following simple process:

He took a cord about the size of a bed-cord, put it in the mouth of the horse like a bit and tied it tightly on the top of the animal's head, passing his left ear under the string, not painfully tight, but tight enough to keep the ear down and the cord in its place. This done, he patted the horse gently on the side of the head, and commanded him to follow, and instantly the horse obeyed, perfectly subdued, and as gentle and obedient as a well-trained dog; suffering his feet to be lifted with entire impunity, and acting in all respects like an old stager. The simple string, thus tied, had made him at once as docile and obedient as any one could desire. The gentleman who thus furnished this exceedingly simple means of subduing a very dangerous propensity, intimated that it is practised in Mexico and South America in the management of wild horses. Be this as it may, he deserves the thanks of all owners of such horses, and especially the thanks of those whose business it may be to shoe or groom the animals.—*The Plough, the Loom, and Anvil.*

Correction.—On referring to the Transactions of the Hampshire County Agricultural Society, we find the statements of Messrs. Moses Stebbins, Austin Smith & Sons, and Samuel Powers, in relation to the management of their farms. In our weekly paper of the 21st January, we gave a portion of these statements, under the caption, "*Franklin* Co. Premiums." It should have been, Hampshire County Premiums.

MARYLAND OYSTER TRADE.

According to the *Baltimore American*, the product of the oyster trade of the city is equal to or greater than the product of all the wheat and corn raised in the State of Maryland. The whole shores of the Chesapeake Bay and its tributaries are adapted to the growth of the oyster, and as but one year is required for their full growth, an immense profit accrues to those engaged in the business—a profit which is estimated at some three hundred to six hundred per cent. There are 250 vessels engaged in the business, which average about 900 bushels to the cargo, and require nine or ten days for the trip. These vessels, making in the aggregate 6,000 trips during the eight months in the year in which they are engaged, give a total of 4,800,000 bushels per year sold in the Baltimore market. The oysters bring an average price of 50 cents per bushel, which gives a grand total of $2,400,000 per year paid for oysters by the dealers in the city. Some of the houses send by the Baltimore and Ohio and Baltimore and Susquehanna railroad, to say nothing of the other modes of transportation, from eight to twelve tons of "canned" oysters per day. The shells are carried for manure to all parts of Virginia and North Carolina. In the "shocking" of oysters, the shells will increase about one-fourth, which would give a total of about 6,000,000 bushels of shells, which sell for two cents per bushel, making a return of $100,000 per year for the shells alone.

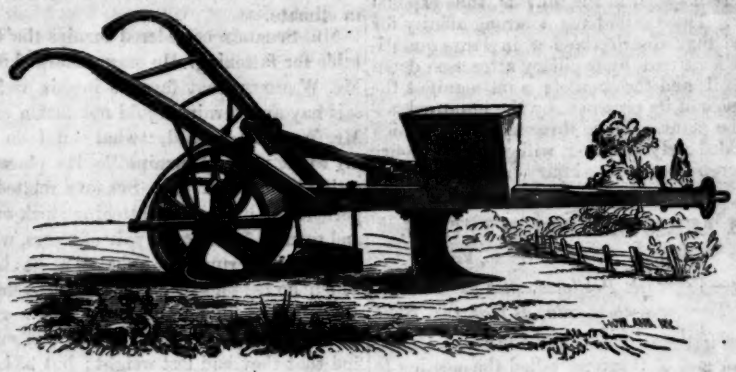
BUTTER-MAKING.

Miss Emily says in the *Ohio Cultivator*, "I have for several years had the entire care of the milk department in my father's famil'y. I therefore read with great interest whatever relates to making butter and cheese, and I found much that was different from what I had been in the habit of practising. One case of this kind, was directions for making butter in winter, according to the Russian method, by which, it was said, butter could be made with as little churning in winter as in summer. So I set about trying the experiment, and the result exceeded my expectations. Before I go to milk I put a kettle, say one-third full of water, and large enough to set the milk pail in it, on the stove, where it will get boiling hot by the time I come in with the milk.

Then strain the milk into another vessel, and wash the pail (which should be tin,) then pour the milk back into the pail, and set it into the kettle of boiling water, until the milk becomes scalding hot, taking care not to let it boil, then pour it into crocks or pans, and set it in the cellar for the cream to rise in the usual way. Cream procured in this way will seldom require twenty minutes to churn, while by the common practice, the poor dairy-maid may often churn for hours, and then perhaps have to throw all away, as I did on several occasions before I happened to gain this valuable information. So much, Mr. Editor, for one instance of the advantage that a young lady may derive from agricultural reading."

The process given above will answer in summer as well as in winter.

☞ The Society of Industry, in France, has offered a prize of 1,000 francs for the best treatise on the potato.



BATCHELDER'S CORN PLANTER.

By permission of Messrs. Ruggles, Nourse, Mason & Co., we are allowed to use the engraving of this Planter from their copyright catalogue, and the following explanation of its capacity for work. It says: "This is one of the best machines yet invented for planting corn. The seed is put into the hopper above the beam, and as the horse moves along, the share below opens the furrow; the corn is then dropped by arms moving horizontally. These arms have holes in them of a proper size to receive any required number of grains, and as they pass in and out of the hopper, the holes are sure to be filled with the seed, which as surely drops into a tube conducting it to the bottom of the drill made by the share, which is so formed that it passes under the surface at any required depth, and deposits the grain without turning over the earth. A triangular iron follows to remove all lumps and stones, and a roller to compress the earth over the seed. The dropping of the seed is always visible to the operator, and thus ensures his work being perfectly well done. The arms are made to drop the corn nearer or farther apart, by different sized cog-wheels fastened on the crank, moving the arms quicker or slower as required; five changes can be made. Those usually made drop from two feet to four feet apart, as wished. The machine requires a horse or mule to draw it, and with a person to tend it and drive, will plant 12 to 14 acres per day, according to the width of the rows apart.

Wool.—The close of the year leaves a light stock of domestic pulled and fleece wool on the market, but with what still remains in the country it is supposed to be sufficient to supply the wants of manufacturers till the new is ready for sale. The apprehended scarcity towards the close of last season induced manufacturers to go into the country immediately after shearing, when they bought freely. A considerable portion of the clip has been sold at high rates before shearing, which with the exorbitant prices asked for the wool left in the hands of farmers, prevented dealers getting their usual supply. The wool still remaining in the country is held several cents above the prices at which it is selling in the market, and it is supposed manufacturers will be compelled to turn their attention to the country for their supply before the next clip will be ready for market.—*Boston Courier.*

THE CONCORD FARMER'S CLUB.

HOW TO RAISE CORN PROFITABLY.

The following remarks of Dr. Reynolds, were accidentally omitted in our report of this club last week:

Dr. Reynolds said that the best field of corn he had ever seen, was raised in the following way. The soil was good. The sward was thick and firm. 16 loads of good manure from the barn-yard were spread on the grass. The furrow was turned flat and smooth. Then it was harrowed and furrowed, without disturbing the furrow slice; 8 loads of manure were put in the furrow. It was planted in drills, one kernel every ten inches. The rows were the usual distances from each other. This field yielded a hundred and five bushels. The corn was the 12 rowed. He is disposed to think this one of the best methods of planting corn upon land that has been mowed several years. The roots strike through the sod, and in a dry season they find moisture. The ammonia generated from the decomposition of the manure is retained by the sod for the use of the roots.

The Dr. said the enemy which the corn has to fear most in New England, is the drought. There are three means by which we may guard against this to some extent. The first is the method of cultivation indicated above, for grass land. The second, is on stubble land, deep plowing. If the soil is loosened deeply, the roots will penetrate it till they find moisture. If there is no other ben-

efit from deep plowing, this is a sufficient reason for it. Third. Frequent stirring of the surface soil—whatever of potash or soda or lime or ammonia there may be in the soil, is thus exposed to the air. These salts have a strong affinity for water, and they absorb the dew in large quantities and it is carried by capillary attraction down into the soil, and the rootlets soon manifest the consciousness of its presence, by the improved aspect of the plant. These three means, to which may be added early planting, will generally secure our corn crop from serious injury from drought.

SIXTH AGRICULTURAL MEETING,

At the State House, Tuesday Evening, Feb. 21.

Subject—*Vegetable Products, such as Carrots, Beets and Turnips,—their value as feed for Stock compared with English Hay and Corn.*

Mr. Proctor, of Danvers, called the meeting to order, and on motion of Mr. Howard, of Boston, was appointed chairman for the evening.

Mr. Proctor, after a few appropriate preliminary remarks, proceeded to comment on the subject for discussion. If the question were asked, he said, "what is the value of a ton of carrots for the feed of stock, compared with that of a ton of hay?" it might be answered, that if anything can be learned from the price carrots usually bring in the market, it would be about half the value. That is, when hay commands $16 a ton, carrots bring $8, and so proportionately. But if it is asked what is the effect of feeding carrots to milch cows, one person will say that they greatly increase the quantity and improve the quality of the milk, while another will declare that they do neither, but improve the general condition of the animal. Well defined experiments of this kind of feeding are much needed. Messrs. Lincoln and Dodge, of Worcester, in the pursuit of such experiments, have found a favorable estimate of the value of carrots. Mr. Porter, of Bradford, has come to a different conclusion. Mr. Colman thought highly of their value, and strongly recommended their cultivation. He cites many examples to show their value—particularly as feed for horses. More than double the quantity of nutritive matter can be obtained from an acre of carrots, than almost any other crops;—it therefore is an object to grow them. Experience has shown them to be as certain, as almost any other crop.

Mr. Sprague, of Duxbury, said that some of the best agriculturists in Plymouth County say they cannot raise carrots, turnips, &c., with benefit; they think turnips do not fatten cattle. Reference is often made to the success which attends cultivation of vegetables in England, but he thought it was no criterion for the American farmer. The English climate, being moist, is peculiarly fitted for raising turnips, while ours is unfavorable on account of its dryness and heat. The farmers of Great Britain rely mainly on root crops in rearing stock for the shambles. Their grazing, too, is superior to ours, for the same reason, of difference in climate.

Mr. Sprague considered turnips the best vegetable for fattening. He once remarked to the late Mr. Webster, that farmers in his vicinity said salt hay and turnips would not fatten cattle, and Mr. Webster replied, "what can I do to fatten my cattle without turnips?" He placed a high estimate on them. Mr. Sprague related some experience of his own in fattening stock on salt hay and turnips. He has a pair of steers, which were in common "running order," as it is termed, which he fed on salt hay, with one bushel of turnips per day, for four months. They were weighed after three or four weeks, and he was surprised to find that they had lost weight; but he kept up his feed of salt hay and turnips until the last week of the four months, when they were fed on English hay and meal—at the expiration of this period they were sold to the butcher. Some of their meat was brought to him, and proved of excellent quality—as fat as would be desired. Mr. S. said he had raised 407 bushels of beets on a quarter of an acre of land, and 300 bushels of carrots on the same extent of ground; but these were very large crops. Roots, fed out in the winter, operate something like green food, but with better effect.

Mr. M. M. Fiske, of Framingham, inquired of Mr. Sprague what the condition of his land was after producing those large crops of turnips.

Mr. Sprague said he could not answer the question, but did not consider the land any worse off than after any other crop. He did not think root crops more exhausting than others. Last year he saw fifty bushels of corn per acre raised on Mr. Webster's land where turnips had been raised the year before. Turnips are 85 per cent. water, with a broad spreading leaf, and he did not think such a plant could draw very hard upon the soil.

Mr. Fiske said that he had once been quite enthusiastic in regard to root crops, but after repeated experiments, had come to the conclusion that if he wished to raise any other crops, he must give up raising turnips. He thought they impoverished the soil. He had tried feeding turnips to a couple of cows—a peck a day to each. One of them fatted rapidly, while the other grew lean, but both gave an increased quantity of milk. He did not know how to account for the difference in flesh of the two, but thought it must be that turnips did not always agree with animals.

Mr. Tower, President of the Berkshire County Agricultural Society, said he had had some experience, and had taken a great deal of pains to inform himself in regard to this subject, within the last ten years. We cannot expect a good crop of any kind unless the land is rich; nor of carrots unless the land is plowed deep or spaded deep and

is loose. Alluding to the idea expressed by Mr. FISKE, that turnips impoverished the land, he remarked that he believed it was not best to put the same crop on the land every year, as there are certain qualities which that crop requires in the soil which may become exhausted by this continual draft upon them. The best crops are seen usually on sward land, well manured. The best method for obtaining a good crop of ruta baga is to sow immediately after getting in the other crops—no matter if in the middle of May. If the crop fails it may be sown again, and the farmer may be sure of getting a good crop. A gentleman of his acquaintance last year sowed his seed rather late, and the fly or something destroyed it, and he lost his crop. Experiments in root culture often fail from not selecting good land.

In regard to feeding carrots to cattle, Mr. TOWER said his experience led him to consider them very good, particularly for cows in winter, when they are confined to dry food. For the last 15 years, he had fed his cows either with carrots or ruta-baga turnips, and he thought the turnips produced the most milk. Well cleaned ruta bagas will make as much milk, pound for pound, as potatoes. He said he had never seen a good milker, when producing milk in abundance, but what would lose flesh, though she might be in good heart. When cows give little milk, they generally increase in flesh. He had tried feeding his cows for ten weeks on carrots, three pecks per day, fed twice a day, and then two weeks with ruta-bagas, but could not perceive any difference in the quantity of milk, while the animals relished both equally well. In his opinion they did not eat more than half the usual amount of fodder, when supplied with roots. He considered turnips a very profitable crop to raise, if the ground is adapted to their cultivation. For fattening cattle, a gentleman who had tried them, told him that he had satisfied himself that rutabagas would make beef as fast as anything else. Another person whom he knew, also preferred them for fattening sheep.

Mr. OLIVER M. WHIPPLE, of Lowell, made some remarks on farming in general, and advocated deep plowing with much confidence. He believed that the effects of dry weather could easily be obviated by plowing deep. He had plowed 12 inches deep for the last dozen years, and had always as good crops of grass and corn as any other man. One advantage of deep plowing is that it protects the manure, which is otherwise exposed to the sun and evaporated, while the turf is also deteriorated. Take the grass land and turn it 12 inches, and the turf becomes part of the manure. He had a field which was plowed 12 inches and manured heavily. The first year corn was grown up it, the next rye, the third year as much grass as could be made on the ground, and the nine following years it was mowed. Last year he raised 44 bushels of corn to the acre from it without manure, plowing 12 inches, the corn being planted on the turf which was turned well under the soil, the corn being hoed but once. The soil was light and sandy, and although so hot during the summer as to send the heat through the shoes, the corn did not yield to heat. He had also raised an extraordinary crop of buckwheat without manure, and believed good crops could be raised on any fair land without manure by plowing deep. He obtained a grand crop of beans from land which had not been manured for twenty years.

Mr. COPELAND, of Roxbury, thought a good deal was to be gained by attending to what was done abroad. What makes the root crop valuable to England, it has been said, is the climate. Still they raise other crops there equally well, as Indian corn, &c., not needing moisture; and if we can raise their other crops, in this country, we can raise the root crops. He would venture to say that a very large portion of the most profitable kinds of farming is entirely unknown to the farmers of this State. Farming is of three kinds—market, milk, and stock farming. Market farmers grow the crops which pay the best, and just as long as they can get one dollar per bushel for ruta bagas they will not grow corn by the acre. Milk farming embraces butter and cheese, and any crop which tends to increase the quantity and quality of these it is very desirable to grow; the root crop he believed produced this result.

Mr. COPELAND enforced the utility of farmers keeping an accurate account of what each crop he raised costs him, and what he got for it, for by comparing the results of the different crops he could readily decide which was the most profitable. In this connection, he presented some interesting calculations, illustrating this fact. He had ascertained on inquiry that where a man fed out to his cow a peck of turnips daily, the yield was one quarter more per day for six months, while she was fed one quart of meal less than previously. Assuming that the cow gave six quarts per day previously, the comparative value of turnips and corn may be stated as follows;—

6 mos. 180 days, 6 qts. milk per day, 1080 qts., at 5 cts. per qt.	$54,00
6 mos. 180 days, 1 qt. milk per day, 180 qts., at 5 cts. per qt.	$9,00
6 mos. 180 days, 1 qt. of meal less per day, 180 qts., at 3 cts. per qt.	$5,40
	$14,40
This is 1 qt. in 6, 1 in 4 gives additional	5,40
	$18,90

From the above increase in the value of the milk of the cow, it appears that the turnips, (180 pecks or 45 bushels,) sold for 32 cents per bushel.

500 bushels turnips at 32 cents per bu.	$160,00
500 bushels turnips cost 12 cents per bu.	60,00
Profit	$100,00

50 bushels of corn worth $100 per bu	$50,00
50 bushels of corn costs 50 cents per bu	25,00
Nett profit	$25,00

The above figures are based on a scale of 50 bushels of corn, and 500 bushels turnips, each to the acre.

The following is a comparative statement of the value of oats and carrots, for feed:—

500 bushels oats at 50 cts. per bu	$250,00
800 bushels carrots at 16 cts. per bu	80,00
Profit in favor of carrots	$170,00

It costs no more to raise 700 bushels per acre of turnips or carrots than 500, while the profits will be greatly increased.

For fatting stock he considered 8 bushels turnips equal to 1 bushel of corn, the former being worth 96 cents and the latter $1,03 or $1,05, while the turnips, being softer and moister, will give the meat a better flavor, as is the case with English mutton, and instead of being "a streak of fat and a streak of lean," as we call it, will be mingled throughout. The cultivation of turnips may be greatly cheapened, and made less laborious by using a seed sower.

Mr. Howard, of the *Cultivator*, said he could not place too much reliance on scattered cases of injury to the soil by raising turnips; no general rule, he conceived, could be established to this effect. The English raise them with great success, and it is well known, regard them as the sheet anchor of their husbandry. With the increase of the root crop in England has increased the amount of breadstuffs and the number of animals raised, a state of things which could not follow if root crops exhausted the soil. Mr. Howard related some interesting cases going to show the profit of raising turnips. He thought the matter needed thorough investigation.

Further remarks were also made by Messrs. Fiske, Russell, of Pittsfield, Sprague, and the Chairman, and at 25 minutes past 9 the subject for next Tuesday evening was announced as follows:—

Dairy products,—what class of animals is best fitted for the making of butter and cheese, and what is the best mode of feeding for these purposes?

How the Earth and Jupiter Whirl.—While the orbital velocity of Jupiter is 700,000 miles per day, 30,000 per hour, 500 per minute, and 8⅓ per second! a speed sixty times greater than that of a cannon ball—the orbital velocity of our little planet, the earth is, 1,653,267 miles per day, 69,890 per hour, 1,148 per minute, and 19.1 per second. In short, the orbital velocity of the smaller and more centripetal planets is far greater than that of the larger and more centrifugal, although their rotary velocities are the reverse, the enormous circumference of Jupiter completing its revolution pretty nearly three times during the twenty-four hours' rotation of our little sphere; so that Jupiter's day and night are only between four and five hours each in length.

THE LABORER AND THE WARRIOR.

BY EPES SARGENT.

The camp has had its day of song;
The sword, the bayonet, the plume,
Have crowded out of rhyme too long
The plow the anvil and the loom!
O, not upon our tented fields
Are freedom's heroes bred alone;
The training of the workshop yields
More heroes true than war has known.

Who drives the bolt, who shapes the steel,
May with a heart as valiant smite
As he who sees a foeman reel
In blood before his blow of might;
The skill that conquers space and time,
That graces life, that lightens toil,
May spring from courage more sublime
Than that which makes a realm its spoil.

Let labor then look up and see
His craft no path of honor lacks;
The soldier's title yet shall be
Less honored than the woodman's axe;
Let art his own appointment prize,
Nor deem that gold or outward light
Can compensate the worth that lies
In tastes that breed their own delight.

And may the time draw nearer still,
When man this sacred truth shall heed,
That from the thought and from the will
Must all that raises man proceed;
Though pride may hold our calling low,
For us shall duty make it good;
And we from truth to truth shall go,
Till life and death are understood.

MR. KING'S ADDRESS AT NORTHAMPTON.

We listened to this address with much pleasure at the time it was delivered, and have run over it again in the fair form in which it is now presented, with no abatement of interest. It abounds with excellent thoughts very felicitously expressed. It was delivered before the Hampshire, Franklin and Hampden Agricultural Society, at Northampton, on the 12th Oct., 1853. It touches upon most of the prominent points of farm husbandry, one or two of which we give below, on the errors of withholding manure, top-dressing lands, and attempting to cultivate too much:—

"Jethro Tull to the contrary notwithstanding, we do not believe that maximum crops can be produced by the simple disintegration of the soil, with planting. We advise manure, applied with a true *liberal economy*: and not spread upon the field, hours before it is to be plowed in; exposed to the thievishness of the sun and wind.

"It may be unpopular doctrine we preach, but we are not in favor of top-dressing lands with barn-yard manure; for the reasons,—evident and potent to us—that fully one-half of the manurial value of such an application escapes into the atmosphere; and that the chief benefit derived from its application could be attained by a less expensive *mulch*. Mr. Teschmaker, of Medford, Mass., —one of the most scientific and most successful cultivators in America, and one of the most careful of men in expressing an opinion,—estimated the loss of fertilizing value by top-dressing, at nine-tenths of the sum applied. A mulch—the shad-

ing and protection of land by a covering of straw or leaves, or the like—is undoubtedly, of itself, an excellent application; but to mulch with manure, at a loss by escape of fertilizing gases of even one-half of its value, is extravagance. For a top-dressing, use, rather, guano, well composted; bone dust, *ground*, not crushed; the improved superphosphate of lime, or like applications.

"A mistake common to nine out of ten of farmers is to plant from one-third to one-half more land, than they can well handle and properly manure. It is a fact, proved by the dearly purchased experience of thousands, that one acre, thoroughly tilled and liberally manured, will *net* more, than three acres shallowly plowed, and sparingly dunged; just as one hale, hearty man will do more work, than a trio of guant, half-starved spectres, and eat less. Indeed, there is no cormorant so greedy,—no daughter of the horse-leech so insatiable, as land that has been allowed to become hungry; and small doses of manure, like the glutton's ante-prandial 'snack,' seem to serve only as a whet to the appetite."

For the New England Farmer.

FINE SAMPLES OF BUTTER.

We have been favored with the perusal of the following correspondence (written not for publication)—and are permitted to place it in our columns. The topic is one of interest, and we hope others will be induced to make experiments and communicate the results. We were not aware of the varied influences of the season of the year, upon the quality of milk for the making of butter, that these experiments in October and January seem to indicate. So far as our observation has extended, the *finest quality* butter we have ever seen, was made *on grass feed alone*. Without doubt, other kinds of feed will, under favorable circumstances, increase the *quantity*. Much depends upon the *dairy management* and the *kind of churn* used. We have seen it stated that some kind of churns produce *ten per cent.* more butter than others, from the same cream.

Dear Sir:—I send you a small box of butter, such as we usually make at Oak Hill, for your acceptance. The milk from which the butter was made, was taken indiscriminately from seven cows. I have recently made two experiments;—from *one* churning of 24 quarts, I obtained five pounds twelve ounces (5 lbs. 12 oz.) from the other five pounds eight ounces (5 lbs. 8 oz.) The last churning was made during those very cold days, the last of January;—otherwise, I think the result would have been as large as the first experiment, if not larger. Wishing you may find the butter palatable,

Yours, very truly,

Richard S. Rogers.

Danvers, (Oak Hill,) Feb. 10, 1854.

Danvers, Feb. 13, 1854.

My Dear Sir:—I thank you for your favor of the 10th inst., and particularly for the information, resulting from your well conducted experiments in the making of butter. By taking the milk indiscriminately from the product of your entire herd of cows, without any special preparatory feedings, you have as fair an illustration of what can be done, at this season of the year, as is possible to be obtained. The best butter products that have come to my knowledge, are those of the *Oaks cow*, and of Mr. Motley's *Jersey cow, Flora*—each of which yielded milk, *five quarts* of which (beer measure) produced a pound of butter. It would seem from your repeated experiments, under circumstances not the most favorable, that the average quantity of butter obtained from twenty-four quarts of milk, was five pounds ten ounces;—or one pound of butter to four and one quarter quarts of milk;—a remarkable product in my opinion. Knowing the care you have given to the selection of our stock, and the superior arrangements in all the departments of your farm, I was prepared to expect a good product—but yours goes beyond my expectations—it comes, almost up to the October products of the Devon stock, in an adjoining county.

I should like to be particularly advised of the *measure used*, whether (wine or beer measure) of the feed given the cows at the time;—of the time the milk was set before the cream was taken from it—of the temperature of the room and the kind of pans in which it was set; and of the kind of churns used to bring the butter—each of which consideration is important to be taken into view, for an intelligent understanding of the subject.

I have no special interest in this matter, but simply an anxious solicitude to learn the truth; and an entire willingness to follow, wherever it may lead the way.

The quality of the butter was very fine, for the season of the year, and the form in which it was done up, a model of neatness and convenience.

Very respectfully and truly

Your obedient servent,

J. W. Proctor.

Hon. R. S. Rogers.

For the New England Farmer.

REAPING MACHINES.

Dear Sir:—As a manufacturer, I desire to enter my protest against any more petty trials of reapers. They cost a great deal and amount to nothing. The decision at one trial is reversed the next week at another, perhaps with the same machines, and often the competitors can show their defeat was owing to some extraneous circumstances, as not having a suitable team, bad driving, or unfortunate management in some way.

A reaper trial is not like a horse-race, where the sole object is to beat, regardless of everything except the coming out ahead; it is, or ought to be, to ascertain surely which is the best machine, and not so much to benefit the owner, as the farmers, who wish to know what kind to buy.

How absurd is it for any set of men—I care not how great their experience and judgment—to take from three to a dozen reapers, perhaps all of acknowledged merit, and by the cutting of two acres each, as was done at the Wooster, Ohio trial, where mine was defeated; or even by cutting five or six acres, as at the Richmond, Ind., trial, where mine was victor, decide positively and absolutely that one reaper is better than all others.

Such a trial might show whether a reaper would work or not; but to judge between rival reapers, of which there are over twenty of established reputation, each having its points of excellence, a

long and thorough trial must be requisite, to see how they work in different kinds of grain, and under varied circumstances, and how they wear. A trial, to be decisive should go through an entire harvest. One, too, that was thorough and reliable, would be equally available in one State as another. They are also expensive to all concerned. I would therefore propose a general trial on something like the following plan:

Let several State Agricultural Societies unite, each appropriating $200 to $500, and appointing one or two committee-men, in whose experience, judgment and fairness, entire confidence could be placed. Let the committee make their arrangements early as possible, adopt their rules, and appoint time and place of first meeting. They might begin South and proceed North continue the trial for weeks if necessary, leaving out one machine after another as its inferiority became manifest.

The committee should have all their expenses paid, and perhaps compensation besides; and the cost of removing reapers from place to place might also be borne by the committee, in order to enable every builder to come into the trial; and for this reason I would not require any entrance fee, though some of the larger builders would doubtless be willing to contribute to the general fund. If five or more societies can be got to unite in such a trial, I will contribute $200 to $500, or as much as any other builder.

The surplus funds should be divided to the best machines, say half to the first, one-third to the second, and one-sixth to the third, to be paid in plate or money, as might be desired by the winner.

To save time and expedite arrangements, I would suggest to parties interested to correspond with Col. B. P. Johnson, *Secretary N. Y. State Agricultural Society, Albany, N. Y.* I have not communicated with him, but am quite sure his interest in agricultural matters will cause him to bear the labors with cheerfulness.

Yours respectfully, J. S. Wright.

Chicago, Feb. 7, 1854.

UNDERDRAINING.

In our rambles about the country, we have noticed thousands of acres of wet, undrained lands; and many of them were annually mown over for the scanty crop of wild, sour grasses, brakes, pollypods, &c., that they yield, which, when gathered into the barn as fodder, scarcely repay the expense of getting.

These wet soils, generally, may, at a moderate expenditure of labor, be made the most valuable and productive portion of many of our farms. If, in their natural wet state, they are plowed and planted with potatoes, or sown with oats, (as is sometimes the case,) the product is usually poor. Sown with English grass seeds, they may yield a tolerable crop, for two or three years; but the wild grasses and brakes will soon take their place. It is practically impossible to grow, successfully, what we term good English crops, upon a soil thus saturated with water, however rich it may be in all the requisite ingredients of plants; and we know that many of these water-logged soils, when judiciously drained, are of the best quality. But they have long rested under the stigma of being poor, heavy, cold lands. Now it should be known, that there is no such thing, in the common acceptation of words, as heavy, cold lands; only, as they are rendered so by excess of water, which becomes stagnant, causing the formation of acids, preventing the admission into the soil of air and warmth, which are indispensable to the perfection of the more useful kinds of plants.

To illustrate this, we quote from Prof. Johnston: "When an open pan of water is placed upon the fire, it continues to acquire heat, till it reaches the temperature of 212° *Fah.* It then begins to boil, but ceases to become hotter. Steam passes off, and the water diminishes in quantity. But while the vessel remains upon the fire, the water continues to receive heat from the burning fuel, as it did before it begun to boil. But, since, as already stated, it becomes no hotter; the heat received from the fire must be carried off by the steam.

"Now this is universally true. Whenever water is converted into steam, the ascending vapor carries off much heat along with it. This heat is not missed, or its loss perceived, when the vapor or steam is formed over the fire; but let water evaporate in the open air from a stone, a leaf, or a field, and it must take heat with it from these objects; and the surface of the stone, or leaf, or the field must become colder. That stone or leaf also, must become coldest, from which the largest quantity of vapor arises.

"Now, let two adjoining fields be wet or moist in different degrees; that which is wettest will almost at all times give off the largest quantity of vapor, and will, therefore, be the coldest. Let spring arrive, and the genial sun will gently warm the earth on the surface of the one; while the water in the other will swallow up the heating rays, and cause them to re-ascend in the watery vapor. Let summer come, and while the soil in one field rises at mid-day to perhaps 100° Fah. or upwards, that of the other may, in ordinary seasons, rarely reach 80 or 90°; and, in wet seasons, may not even attain to this temperature.

"What, then, is the cause of the coldness and poverty, the fickleness and uncertainty of produce on land of the kind now alluded to? It is the presence of too much water. The application of this merely rudimentary knowledge, will enable farmers, (if they will but set about it,) to remove from many improvable spots the stigma of being poor and cold;—an appellation hitherto applied to them, not because they are by nature unproductive; but because ignorance, or indolence, or indifference, has hitherto prevented their natural capabilities from being either appreciated or made available. What is the remedy? A removal of the excess of water. And how? By effectual drainage." L. B.

Journal of Agriculture.

The Puritans.—Bancroft, the Historian, says the Puritans established a worship purely spiritual. To them the elements remained but bread and wine; they invoked no saints; they raised no altar; they adored no crucifix; they kissed no book; they asked no absolution; they paid no tithes; they saw in the priest nothing more than a man. The church, as a place of worship was to them but a meeting-house; they dug no graves in consecrated earth. Unlike their posterity, they married without a minister, and buried the dead without a prayer.

Highland Nurseries, Newburgh.

NEW YORK.

A. SAUL & CO., in inviting the attention of their *patrons* and the public in general, to their very extensive collection of *FRUIT AND ORNAMENTAL TREES, SHRUBS, &c. &c.*, would respectfully inform them that the stock which they offer for sale the coming spring is unusually fine, both as regards quality of trees, variety of kinds, &c., &c.

The soil and climate of our Hudson Highlands have rendered proverbial the success of the trees sent from here to all parts of the union, and the accuracy and precision so indispensable in the propagation of fruit trees, for which this establishment has long been celebrated, render errors in nomenclature of rare occurrence.

They have propagated in large quantities, all the *leading standard* varieties, which are proved best adapted for general cultivation, especially those recommended by the American Pomological Society; as well as *novelties* of both *native* and *foreign* origin.

To particularize within the limits of an advertisement would be impossible; they refer to their general catalogue, a copy of which will be sent to all *post-paid* applicants, on enclosing a post office stamp.

The following comprises a portion of their stock, and are all of fine growth, viz:

Pears in over 400 varieties, both standards on their own stock for orchard culture, and on the Quince for Dwarfs, Pyramids, and Quenoucle, for garden culture.

Apples in over 300 varieties, both standards and dwarfs; also, Cherries, both standards and dwarfs; Plum, Apricot, Peach, Nectarines and Quince trees in every variety.

Grape Vines, (both native and foreign, for vineries;) also, Gooseberries (50 best Lancashire varieties.)

Currant, Raspberry and Gooseberry plants of all leading and known kinds, together with Seakale, Asparagus and Rhubarb roots.

Ornamental Trees, Shrubs and Vines, both deciduous and evergreen, suitable for street and lawn planting, embracing all the new and rare Conifers, Weeping Trees and Shrubs of recent introduction.

Roses in every variety, including Hybrid perpetual, Hybrid Bourbon, Hybrid China, Hybrid Damask, Prairie, Boursalt, Ayrshire, and other hardy, climbing and garden varieties, as well as the more tender Tea, China, Bengal, Bourbon, and Noisette varieties.

Herbaceous plants, a large collection of Pæonies, Phlokes Campanula, Penstemon, Œnothera, &c., &c.

Dhalias and bedding plants for the parterre and flower garden, in large quantities and variety.

Hedge Plants, 500,000 strong 2 year old Osage Orange in three sizes, at $10, $8 and $6 per 1000. Also Buckthorn plants, 2 years old at $8 per 1000. Arbor Vitæ for screens, &c., &c.

Dealers and planters of trees on a large scale will be dealt with on the most liberal terms.

Newburgh, Feb. 18, 1854. *2

Caveats.

PEOPLE'S PATENT OFFICE
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INVENTORS and others desiring to apply for Caveats, are informed that all the necessary drawings and papers are prepared by the undersigned with the utmost dispatch and on the most moderate terms. All other Patent business promptly attended to.

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ALFRED E. BEACH,
Solicitor of Patents,
86 Nassau Street, New York.

Feb. 4, 1854. 1tw1t*

Brahma Fowls.

The celebrated Brahma Fowls, purely bred, also Canton and Marsh Shanghae or imported fowls, for sale at fair prices.

WILLIAM N. ANDREWS,
Dover, N. H.

March 1, 1854. 2m

Fertilizers.

BEST PERUVIAN GUANO.
Super-Phosphate of Lime.—"DeBurg's No. 1."
Poudrette, of the best quality.
Ground Plaster, suitable for agricultural purposes.
Ground Bone, Bone Dust and Burnt Bone.
Also, Grass Seeds of reliable quality at the lowest market price.

GEO. DAVENPORT,
5 Commercial, corner of Chatham Street, Boston.

Feb. 18, 1854. tf*

Valuable Potatoes for Sale.

POTATO ROT.—A REMEDY BY WISE IMPORTATION AND REPRODUCTION!

THE subscriber offers the following valuable varieties of potatoes for sale. The N. Y. State Agricultural Society have generously encouraged their importation and culture.

1st. THE ROUGH PURPLE CHILI. This was imported at a great expense from South America, in 1851, and was the only sort out of eight adapted to our climate. For *hardiness, yield, and quality for the table*, it has no equal. Seventy-five small parcels of it were widely spread, in 1853, over twelve Northern States. From more than one third of them, embracing nine States, reports have been received. These reports, notwithstanding the unfavorableness of the season, usually show a yield varying from twenty to sixty pounds, from one pound planted. But *two* cases of disease have been reported, one from Mass., and one from N. Y., both in circumstances of very unfavorable culture. The adaptation of this variety to the varying soil and climate of our country is such as to render it superior to any now cultivated. Price $8 ℔ Bushel.

2d. SEEDLINGS OF THE ROUGH PURPLE CHILI. These were derived from the seed-ball of the preceding, in 1852. They present a considerable number of varieties. They have been chosen by three successive selections, from nearly eight hundred varieties, so as to secure hardiness, the best yield and fine flesh. In season of maturity many of them, and in color and shape the most of them, exceed the parent. They are now offered to the public, after a most laborious and costly cultivation, in the fullest confidence that they will make an addition of valuable sorts to those now in use, such as have never before been made. Connected with them are some other sorts of the same age, and equally valuable, and similarly selected from three other families. Many of these seedlings were widely tested the last year, in connection with the Rough Purple Chilis. ☞ Those varieties of these seedlings which are TOO LATE for the Northern States, have been expressly selected for the South. Price $8 ℔ Bushel.

☞ Each parcel ordered will be safely packed and directed to the purchaser by Railroad, or Express, as directed, and at the expense and risk of the purchaser. No package failed last year to reach its destination.

☞ Dealers will be allowed a discount of twenty-five ℔ cent.

☞ Purchasers who take parcels from my house and pack for themselves, will be allowed twenty-five ℔ cent. discount.

☞ All orders answered *for cash* only.

RESIDENCE, near the State Lunatic Asylum.

CHAUNCEY E. GOODRICH,

Utica, N. Y., Feb. 10th, 1854.

References.

The following persons are acquainted with these potatoes, having all cultivated them the last year:

D. A. Bulkley, Williamstown, Mass. A. S. Mitchell, Farmington, Conn. A Bradley, Whitestown; H. H Eastman, Marshall; Dr. H. P. Hays, Wyoming; J. W. Briggs, West Macedon; M. P. Covert, Schenectady; Sam'l Buckingham, Poughkeepsie, N. Y. R. L. Colt, Patterson, N. J. R. C. Walker, Elizabeth; Jas. S. Negley, and Jno. Fleming, Pittsburg, Pa. J. C. Holmes, Detroit, Mich. B. Murray, and H. L. Brush, Ottawa; Rev. G. W. Gale, Galesburgh, Ill. D. D. Cathcart, Bristol, Ind. A. C. Isham, Madison, Wis.

March 1, 1854.

To Farmers.

THE subscriber is now prepared to receive orders for the Improved Poudrette. It has been manufactured under the advice of some of the best agricultural chemists in the Country, and is now commended to the public as the most certain and cheap Fertilizer that can be obtained, acting favorably on all crops, and on all soils. Six different articles are used in its composition, which combined make it a perfect manure for every crop raised in New England. It is finely adapted to corn, and the present and prospective high prices of this indispensable crop, ought to induce all farmers to increase the quantity planted, which they can do profitably by using the Improved Poudrette.

Prof. Mapes says of it, "no farmer using it once, will be willing ever to dispense with it." I raised corn with it the past season at a cost of less than 40 cts. ℔ bushel. Price in Providence $1,50 ℔ bbl., cash. It can be obtained of Messrs. PARKER & WHITE, 59 & 63 Blackstone Street, Boston.

T. B. HALLIDAY,
13 West Water Street, Providence, R. I.

Feb. 25, 1854. 3mo*

Superphosphate.

NO expense has been spared in the combination of this most Fertilizing Manure, which contains the Nutritive Properties of all Plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. It is put up in Bags, at $40 per ton of 2000 pounds each.

Office of the New York Superphosphate Manufacturing Company, No. 150 West Street, New York.

VICTOR R. KNOWLES, Agent.

March 1, 1854. 3t*

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Imported Suffolk Boar,

BULRUSH.

The subscriber now offers the services of his Suffolk Boar, BULRUSH, (to those who wish to improve their Stock.) Bulrush was imported last spring, and is now about one year old. He is remarkably vigorous, and a superior animal. He will be kept for the present, at my stable, near the Depot, Concord, Mass.

JOHN RAYNOLDS.

Dec. 17, 1853. tf.

Cranberry Plants.

BELL, or Egg shaped Variety—commonly raised in New England, and no doubt is the best variety for cultivation—they are hardy and prolific—sometimes produce over 250 bushels ℔ acre, after 2 years, and needs but little cultivation. Circulars relating to culture and price will be forwarded to applicants.

F. TROWBRIDGE,
New Haven, Conn.

Feb. 18, 1854. tf*

Super-Phosphate of Lime.

THIS celebrated Fertilizer, where it has been fairly tested the last year, has been found equal, and in many cases superior to the best Peruvian Guano in its immediate effect, and much more permanently beneficial to the land. It is adapted to any soil in which there is a deficiency of *Phosphate*, which is often the case. All crops are benefited by its application. It is composed of ground bone, decomposed by sulphuric acid, to which is added a due proportion of Peruvian Guano, Sulphate of Ammonia, &c.

For sale, with full directions for use, in bags of 150 pounds each. No charge for package. All bags will be branded "C. B. DeBurg, No. 1 Super-Phosphate of Lime."

GEO. DEVENPORT,

Agent for the manufacturer, 5 Commercial, corner of Chatham Street, Boston.

Feb. 18, 1854. tf*

NEW ENGLAND FARMER

Is published on the first of every month, by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market St., Boston.

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FREDERICK HOLBROOK, } Associate
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Kentish's Prepared or Artificial Guano,

TWENTY DOLLARS PER TON.

POTATO ROT.

Westchester Co., N. Y.

I have used "Kentish's Prepared Guano" this season on potatoes. My crop was large and all sound. Where I did not use it, the potatoes were all rotten and worthless. My neighbors, also, who have not used this Fertilizer, have not raised a saleable potato this year. I consider it a preventive of Rot.

Sept. 29, 1850. G. PREAUT.

Extract of a Letter from E. B. Addison,

Alexandria co., Va., April 23, 1851.

Dr. John H. Bayne, President of Prince George's Co. Agricultural Society, Maryland, has desired me to inform you that last spring he used African Guano, Poudrette, Peruvian Guano, and your Prepared Guano, on Potatoes. The first two were distanced, but the result from the Peruvian and yours was about equal. He pronounces your Prepared Guano to be a very excellent article, and esteems it highly.

Richmond Co., N. Y., July 27, 1849.

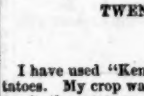
I have made use of Kentish's Prepared Guano on potatoes cabbages, cauliflowers, corn, and grapes. I found the result much more satisfactory and the produce much larger than where I used imported Guano or any other kind of manure.

EDWARD JENNINGS, Gardener.

It is equally Fertilizing on all Crops. See the numerous certificates on this subject, in the printed circular, to be obtained at Kentish & Co.'s Depot, No. 159 West Street, city of New York.

Feb. 18, 1854. 3w*March

Suffolk and Middlesex Pigs.



I have now a prime stock of imported or full bred Suffolk and Middlesex Swine, for sale.

☞ Having just bought the entire stock of G. W. Wilson Esq., of MALDEN, including his fine old Boar and Breeding Sows, I can fill orders with superior samples—old or young. The stock can be seen at my residence, Boardman St., Melrose, Mass. Address

GEO. P. BURNHAM,
Box 22, Post Office, Boston.

Feb. 4, 1854. 4tw3tm℔.